Australian

MODEL RAILWAY

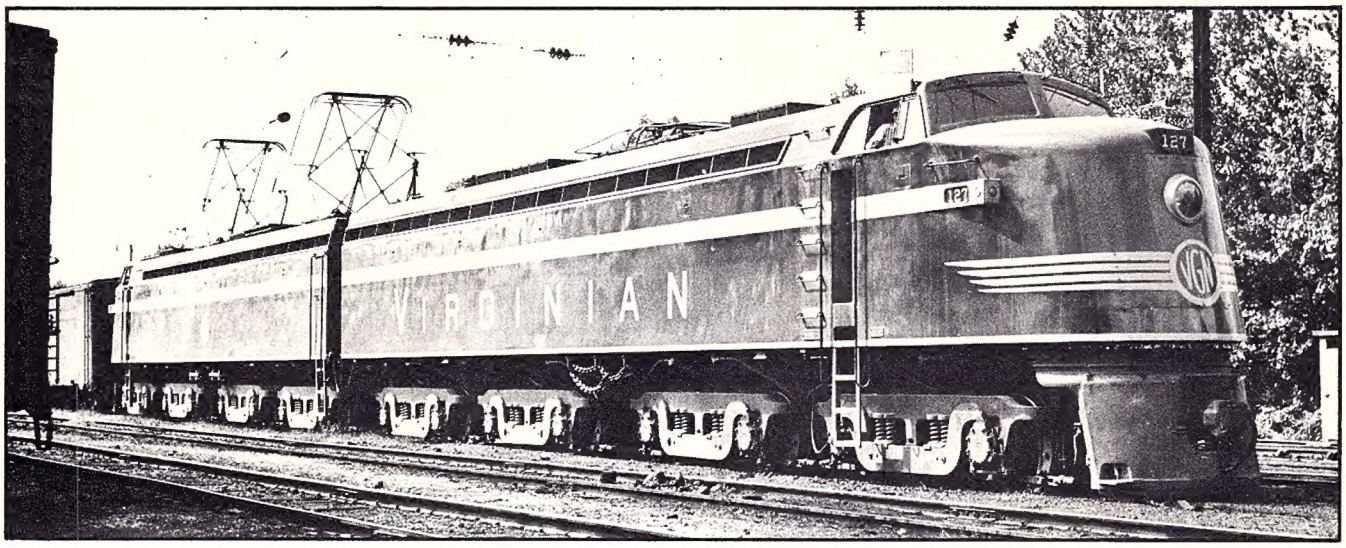
Magazine

MAY/JUNE, 1981. ISSUE 108. Vol. 10 No. 3

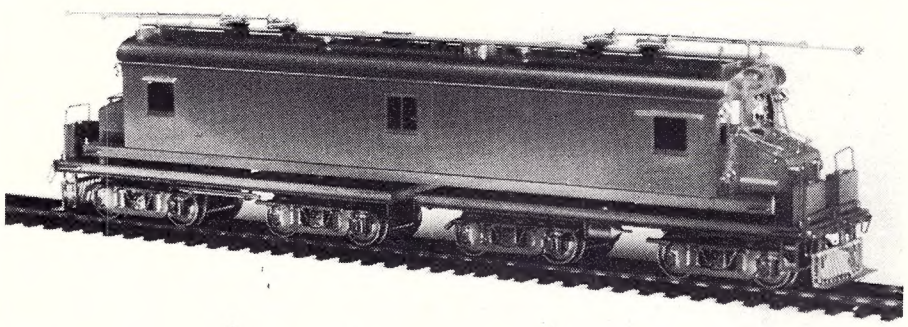
$1.50*

Registered for posting as a periodical — Category B.
* Recommended retail price only.

NEW!...
— ELECTRIC LOCO'S. FOR ALL CLASS OF SERVICE

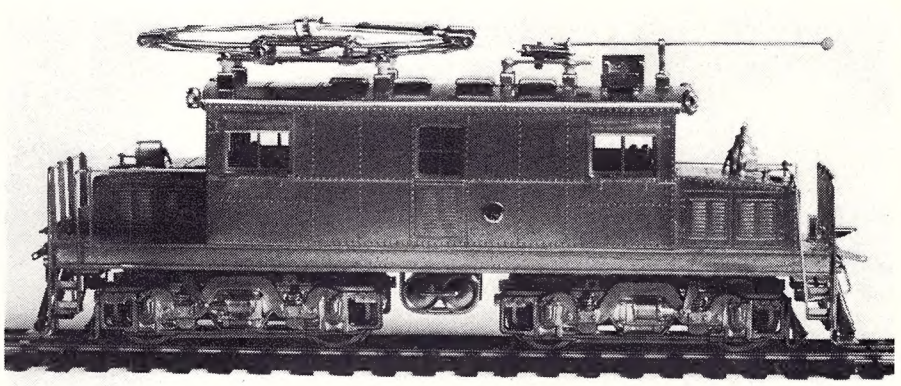


The Virginian was noted for some of the heaviest and largest electric motive power ever placed in service. Alco Models earlier introduced the now famous Virginian A-B-A Box Cab Units in HO and now comes the HO GE 6000 hp A+A Units, from the later era, the prototype of which is shown above. The model comes with both Units powered and all 16 axles geared. Pantographs are pre-blackened and the Locomotive comes insulated for 2-rail or overhead operation. PRICE: $692.00



HO North Shore No. 458 4-Truck Electric Locomotive (ex Oregon Electric). By means of two articulated sub-frames connecting four bogie trucks, this ingenious arrangement coupled eight 145 hp traction motors and permitted maximum flexibility over rough track and curves of minimum radius. Conditions typical of those found on many a layout. Outshopped by Kumata, the model comes powered by large 'can' motor, geared to all axles for maximum performance. Equipped with four trolley poles and insulated for 2-rail or overhead operation. PRICE: $351.35

The Chicago South Shore & South Bend steeple cab Electric Locomotive has long been a favourite amongst traction fans, far and wide. Now this new run has been outshopped by Kumata for Nickel Plate Products. Powered on all axles and detailed down to the 'GE' plates, this Locomotive comes insulated for 2-rail, pole trolley or pantograph operation. PRICE: $289.00.



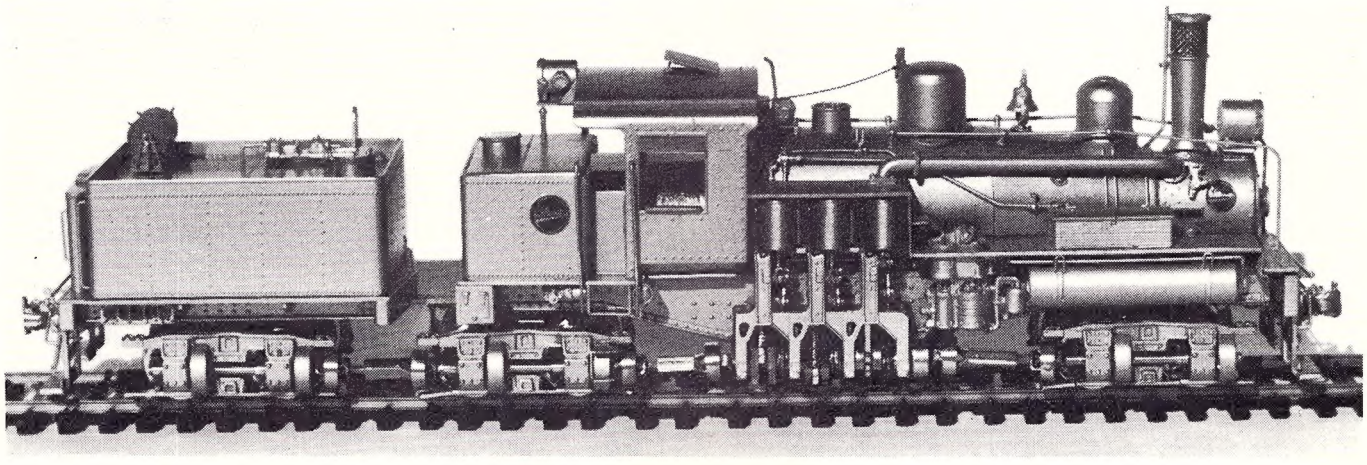
SOLE AGENT & IMPORTER

THE MODEL DOCKYARD PTY. LTD.

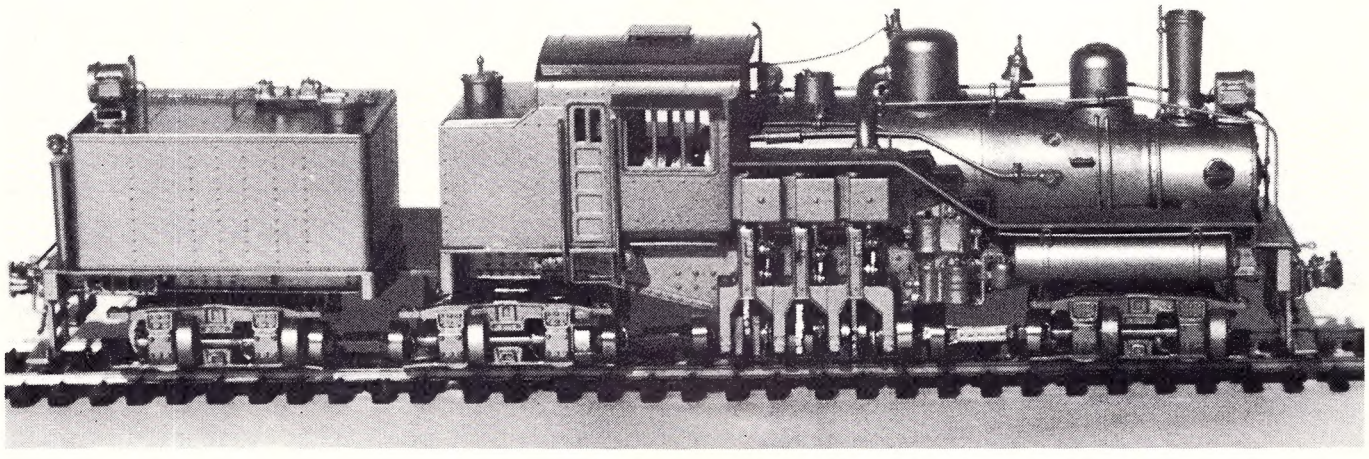
216-218 SWANSTON STREET, MELBOURNE. 3000. PHONES: 663 3505 & 663 4792

NEW!...
— FROM THE SHOPS OF...

UNITED SCALE MODELS



The Willamette Geared Locomotive was the product of the Willamette Iron & Steel Company, of Portland, Oregon and offered significant improvements over the Lima Shay. Options on the latter were standard on the Willamette. They included: girder frames, cast steel trucks, electric headlights and steel cabs. United's HO 3-Truck Willamette Locomotives come in the two versions shown. The Sauk River Lumber Co. super heater type, with open cab and the Coos Bay Lumber Co. saturated type, with closed cab. PRICE: $574.50, either type.



Other News from the *DOCKYARD* . . .

To suit the convenience of our many clients, as from the middle of March, we have extended trading hours to include 9 am-12 noon Saturday. Whilst as usual, our premises will remain open until 9 pm on Friday evenings... Following on the introduction of a No. 4 Double Slip to the Shinohara range of Code 70 N scale Track, production of a No. 6 Double Slip for N gaugers will follow and first stocks are expected about the time these notes appear in print... To make way for fresh deliveries, remaining stocks of the following HO brass Locomotives have now been discounted at the considerable savings shown: PRR 'FF-1' Electric Loco. by Custom Brass; was $417.50, now $305.00. 2-8-2 SP 'MK-6' Loco. & Tender by Alco Models; was $374.50, now $280.00. HOn3 West Side Lumber Co. 24' Flat car (Wood Kit) with trucks by Northwest Short Line; was $12.90, now $9.25. 43' Log Car less trucks by Northwest Short Line; was $7.15, now $5.00. N&W Wood Caboose by Westside Model Co; was $70.95, now $62.00. N&W Steel Caboose by Westside Model Co; was $70.95, now $62.00. 2-10-2 Santa Fe '3010' Loco. & Tender by Westside Model Co; was $266.00, now $215.00. 4-6-0 PRR 'G-5' Loco. & Tender by Westside Model Co; was $205.00, now $161.00. 4-6-2 SP 'P-1' Loco. & Tender by Westside Model Co; was $197.35, now $150.00. 2-10-2 Wabash Loco. Tender by Sunset Models; was $233.50, now $160.00. 4-6-2 Santa Fe '1226' Loco. & Tender by Key Imports; was $254.00, now $185.00 and 2-8-2 PRR 'L-2s' Loco. & Tender by Key Imports; was $273.95, now $196.00... We are interested in hearing from all those wishing to obtain our HO Victorian Railways "R" Class 4-6-4 Hudson Loco & Tender. This classic model was first produced in 1967 and in view of the lapse of time, a re-run will be scheduled, if warranted. STOP PRESS: Due to production delays in Japan, delivery in Australia of the AD.60 Class Beyer-Garratt Locomotives (fully reserved), promised during May, will now come in June.

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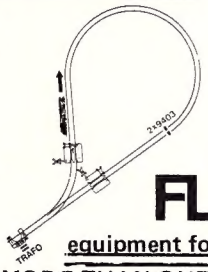

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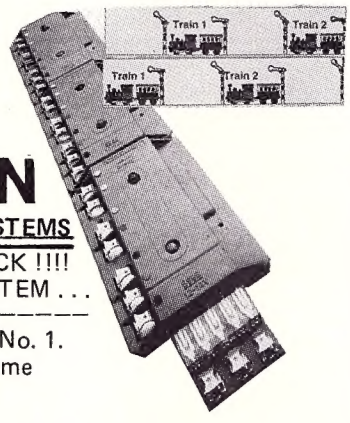

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märklin

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Mini-Club modellers will be pleased to know that the major plastic kit manufacturers have increased their range of models for Z - refer Cat. list.

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L.G.B. - No. 1 gauge	3.00
Marklin - 1980/81 HO, Z, No. 1	3.00
Peco - 1980 HO & N combined	3.75
Rivarossi - HO, N & O - N.S.W.	8.90
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Seuthe Smoke Generators, etc.	.28
Troller, EDA & Locomotion Controllers	.50
Wiking - HO & N Road Vehicles	.70
Vollmer Kits - 1980/81 - HO, N, Z	3.30

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605	Spade	[4]	$2.25
606	Power Pole Head Box	[1]	$2.25
607	Canteen	[5]	$2.25
608	Car Jack	[4]	$2.65
609	Lube Cans	[3]	$2.25
610	Kerosene Lanterns	[5]	$2.65
612	Tool Set of 8 tools	[1]	$3.00
613	2.5 Gallon Gas Can	[4]	$2.65
615	Vice	[3]	$2.25
616	Bench Grinder	[3]	$2.25
617	Smoke Jacket - tall	[2]	$2.65
618	25 Gallon Drum	[5]	$2.25
619	Smoke Jacket - short	[2]	$2.65
620	Switch Stand	[1]	$2.65
621	Picks	[6]	$2.65
622	Oxygen Bottle	[5]	$2.25
623	Oil Can with handle	[4]	$2.25
624	Acetylene Bottle	[5]	$2.25
625	Tyres	[5]	$2.25
627	Long Peavy	[4]	$2.25
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629	Axes and Mauls	[4]	$2.25
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631	Motor Drive w/pulley	[1]	$2.25
632	Small Roller Bearings	[4]	$2.25
633	Large Roller Bearings	[4]	$2.25
634	Overhead Rolling Block and Tackle	[1]	$3.75
636	Steam Buck Saw	[1]	$5.25
637	Toilet	[2]	$2.65
638	Sink with Towel Dispenser	[1]	$2.65
639	Wall Telephone	[3]	$2.65
640	Radio	[3]	$2.65
641	Chair	[2]	$2.65
642	Stove and Pipe	[1]	$2.65
643	Smoke Jack	[3]	$2.65
645	Empty Crates	[6]	$2.65
646	File Cabinet,2 drawer	[3]	$2.65
647	Desk Top and File Cabinet	[1]	$3.00
648	Pool Table & Cue Rack	[1]	$4.15
649	Truck Wheels	[6]	$2.65
651	Oil Can High Boy	[2]	$3.00
652	Springs, Car or Truck	[6]	$2.65
654	Car Rear End	[4]	$2.65
655	Car Muffler	[3]	$2.65
656	Car Transmission	[3]	$2.65
657	Engine Block	[3]	$2.65
658	Auto Jack	[3]	$2.65
659	Milk Can	[6]	$2.65
660	Lamp Shade	[6]	$2.65

EVERGREEN HILL DESIGNS parts are all whitemetal castings. Some items include wire, plastic or etched brass pieces as needed.

GSB RAIL LTD
Expected from GSB during July is their SD40-2 diesel loco. Price should be about $59.95. The model has a flat can motor and a scale top speed of 78 - 80mph. Write for more details or order now.

WESTONS FIGURES HO

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1120	Lawn Mower	$0.95
1121	Saw Horses [2]	$0.95
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1202	Red Cap with luggage	$2.10
1203	Red Cap [porter]	$2.10
1204	Station Master	$2.10
1205	Freight Brakeman hangs on Ladder	$2.10
1206	Freight Conductor	$2.10
1208	Dining Car Waiter	$1.85
1209	Pullman Porter	$1.85
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1211	Hobo, seated with stick, fire and can	$3.40
1212	Hobo, reclining	$2.10
1213	Hobo, walking	$2.40
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1228	Old Man Walking	$1.85
1229	Young Man Walking	$1.85
1230	Sweater Girl, redhead	$1.85
1231	Flexible Freddy, ptd.	$2.10
1232	Flexible Freddy, unptd	$2.10
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1241	Telegrapher 1890's	$1.85
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1249	Telephone Lineman	$2.10
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1251	Passenger Brakeman	$2.10
1252	Passenger Conductor	$2.10
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1254	Hobo, seated with stick and bundle	$2.10
1255	Old Man Asleep in chair	$3.15
1256	Section Hand with pick and shovel	$2.55
1257	Sweater Girl, blonde	$1.85
1258	Blacksmith	$1.85
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1260	Scarecrow	$1.90
1264	Franciscan Padre	$2.40
1266	Boy with Tyre	$2.05
1267	Girl with Tyre	$2.05
1268	Water Pump [2]	$1.15
1400	Dog Scratching	$0.80
1401	Pigeons [6]	$2.65
1402	Collie Dog	$0.70
1403	Dog Sleeping	$0.80
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1604	Windmill, plastic	$1.65
1606	Stone Bridge, plastic	$1.30

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KADEE N SCALE

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1025	Coupler, un-assembled, 2 pair. [For 2 cars]	$3.45
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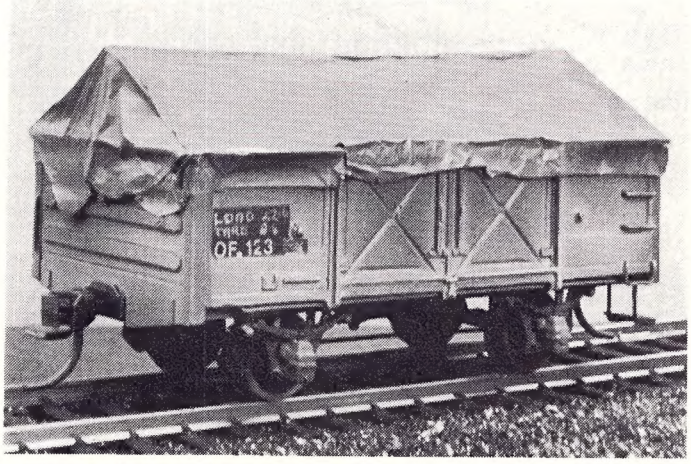
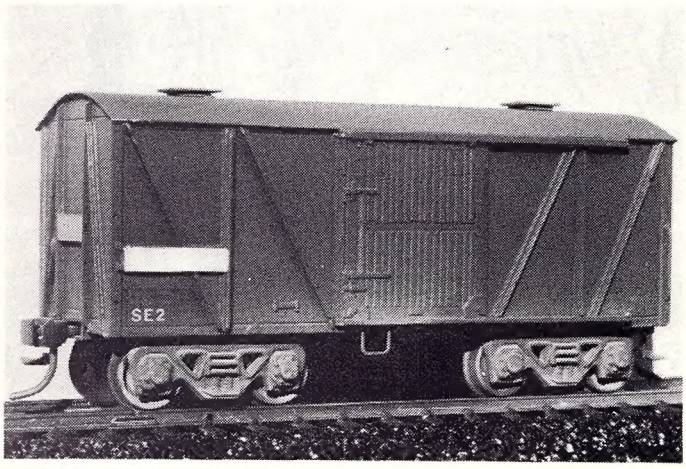
1000	Bettendorf Trucks with couplers. [Pair]	$3.90
1001	Bettendorf Trucks less couplers. [Pair]	$2.50
1007	Non-magnetic wheel pairs on axles. [12]	$4.30
1010	Arch Bar Trucks with couplers. [Pair]	$3.90
1011	Arch Bar Trucks without couplers. [Pair]	$2.50
1030	Roller Bearing Trucks with couplers. [Pair]	$3.90
1310	N Scale Uncoupler. [2]	$3.55

* NEW RELEASES OF AUSTRALIAN PROTOTYPE - HO SCALE - BY BROAD GAUGE BODIES *

BROAD GAUGE BODIES. VR VLEX Louvre Van. Polyester castings. Kit does not include bogies, couplers or decals.



BROAD GAUGE BODIES. SAR OBf. Polyester castings. Kit requires chassis, wheels, decals and couplers.



BROAD GAUGE BODIES. SAR SE. Polyester castings. Kit requires bogies, wheels, decals and couplers.

****

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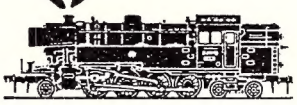

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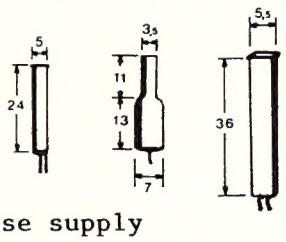

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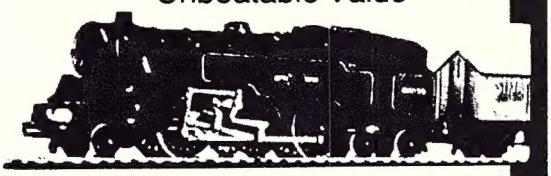

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STRATHFIELD — N.S.W. June 6, 7, 8 at the Strathfield North Public School, cnr Concord Rd and Correys Avenue. Open Sat 10am-7pm, Sun 10am-6pm, Mon 10am-5pm. Admission $1/50¢. Organised by the Sydney N Gauge Model Railway Club.

BLACKTOWN — N.S.W. June 6, 7, 8 at St Patrick's Hall, Patrick Street, Blacktown. Open Sat 9am-6pm, Sun 10am-5pm, Mon 9am-5pm. Admission $1/50¢. Organised by the Prospect Model Railway Club.

FRENCHS FOREST — N.S.W. August 1, 2 at the Frenchs Forest Primary School, adjacent to Arndale Shopping Centre, Frenchs Forest. Open Sat 9am-6pm, Sun 10am-5pm. Admission $1.20/60¢. Organised by the North Shore Railway Modellers Association.

SOUTHERN CROSS MODEL RAILWAY ASSOCIATION

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The annual membership fee for the SCMRA is $10 from March to February and $6 Joining Fee.

Membership entitles you to participate in the activities of the Association, to receive AMRM, and our newsheet Booster. Standards, Recommended Practices and Information Sheets covering model railway practice are included in the joining kit together with a vinyl ring binder and are also issued at regular intervals.

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June 13	Meeting and Structure Modelling contest at Mt Pritchard.
July 11	Meeting and running session at Epping.
August 8	AGM and slide show at Mt Pritchard.

Queensland:

June 13	Meeting at Everton Park.
July 11	Meeting at Bald Hills.
August 8	Meeting at Keperra.

1980 CONVENTION REPORT

The 1980 Model Railway Convention, with the basic aim of improving all aspects of railway modelling, was held at Camp Saunders Conference Centre, Macquarie Fields, NSW, over the weekend of the 1st and 2nd November, 1980.

Excellent talks on a wide range of subjects were presented by Peter Betts, Alex Mathieson, James McInerney, Phil Knife, David Lord and Denis Meredith. The talks were of 45 minutes duration, long enough to cover the main points of the topic, but generating interest where questions and answers continued through tea and lunch breaks.

General activities included a visit to Thirlmere Transport Museum on Saturday afternoon with those remaining at camp making full use of the swimming pool. Saturday night featured a full length movie, "The Train", the film of the 1979 Wentworth Falls Convention and the Channel 9 movie of the 1980 Frenchs Forest Exhibition.

At the final discussion, everyone agreed to holding the next Convention at the same location, at the same time yearly (i.e. 1st weekend in November). Those that attend the Convention provide an intimate sized group, without becoming unwieldy, and the overall rates are reasonable enough to encourage family involvement.

For details on the 1981 Convention ring (02) 579-3791.

Denis Meredith

AMRM

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Australian
Model Railway Magazine

COMMENT

Some time ago I had a group of visitors come to see my layout. It was very much in its early stages, with only a little scenery and enough wiring to run a train around. Or at least so I thought.

Murphy's Law being what it is, it was not until all the visitors were present that I found that I had cut in an additional block before doing the scenery, and had not wired it up.

One of the visitors made the comment that this was a basic error, and that having been in the hobby for many years, I should by now know that track and wiring should all be correct before doing any scenery.

I knocked back his comment as being "telling me how to build MY railway", (I'm a dictator) and he was knocking the way that I personally do things. I shrugged off the comment and fixed the track.

Later on I got to thinking about that comment. My visitor was right of course, but at the time I had felt like doing some scenery, so I did.

This brings me to the point of my tale. There are as many ways of doing things in this hobby as there people doing them. This, for me, is one of the main attractions.

Phil Jeffery.

BOOM OR BUST

The Model Railway Hobby in Australia is at the crossroads. We are about to move from a cottage industry to small business. This is a critical period for both the supply and demand sides.

We on the demand side must support the new, and the not so new, entrepreneurs for if we do not they will retire to the back of the grandstand forever. Equally the suppliers have a responsibility to market only top quality material. The difference between a poor model and an excellent model, in say injection moulded styrene, is mainly in the development stages. The same can be said for the opposite end of the spectrum, the brass locomotive. There are people ready, willing and able to assist in this important work and believe me they are not expensive.

In the past we have seen some excellent brass locomotives but we have also seen some turkeys. Similarly we are now seeing a range of excellence in the new mediums.

We have but a short period of time to get our act together, *all* must contribute before we receive a dividend. But what of the cottage industry which has been such an integral part of the model railway scene up until now? It too can share in the boom. In fact there is more scope for quality small volume lines than ever before. With the smaller Australian market the limited run quality kit for special vehicles or, more importantly, buildings will play an even bigger part than ever before.

Remember, however, that quality control does start during production. Quality can and must be designed into products if they are worthy of support. If they are quality products then the hobby *must* support them, or bust.

Phil Collins.

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Shantytown, near Greymouth, on the west coast of New Zealand's South Island, is the home of this Climax loco which is the subject of the above photo and the cover of this issue. Shantytown is a recreation of an 1880's gold mining town, the Climax taking tourists for trips into the surrounding forest. The photo was taken on April 17, 1980 and is credited to Jack Parker.

ON THE COVER: *Climax 1203, as used in Shantytown for tourist work at Shantytown on the west coast of the south island of New Zealand. Photo by Jack Parker.*

Australian Model Craft Co.

22nd April, 1981

Dear Readers,

Because overseas exchange rates have been more favourable to Australia, differences have offset all, or a good part of the 1981 overseas manufacturers price rises. This has meant that we could, in the main, hold our 1980 prices for Rivarossi, Merten, Vollmer and Arnold Rapido. Rises in prices in Britain are fiercer and the gain in currency costs has been less so that there will be rises in the prices of British goods. There have been some rises in "Roundhouse" prices after a long spell with no changes. We've lost some ground with America on currency costs so you can expect adjustments to some prices soon.

We believe that it is important to keep prices as low as possible so your model railway $ will go further.

The January Seamens' Strike disrupted shipments to a considerable extent which has had effects over a long period. Hopefully, by the time you get this magazine, things should be back to normal. Exceptional delays have occurred in the transit of magazines - one batch taking five months to get here and there are prospects of equally long delays. Only the Post Offices would know why.

Our "Model Railway Newsletter" will continue for some time yet, but further subscriptions are not being accepted and you will need to arrange with your club or hobby shop to get copies if wanted.

There are a number of new and exciting products to come to hand later this year in our range of Distributed Products. Watch for them.

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MODUS OPERANDI

1. The Lakeland Railway: Introduction to the operating code

by David Leaman

'Modus operandi' is a series of articles describing the operation of a model railway. The series has been prepared with two main objectives in mind:

1: to discuss the factors which make for realism, and
2: to present an example of comprehensive operation with high traffic density and single operator control.

Extent of layout or rolling stock is not crucial to appreciation or incorporation of ideas from either objective. Good layout design may be, but that comes with experience and study of the prototype. There is a secret third aim; to encourage others to try some real practices and obtain, or stir, feedback from which we might all gain.

The series is in four parts. This part discusses why realistic operation is a good idea and what operation may encompass. The layout of the Lakeland Railway (introduced AMRM Mar/Apr 1980) is presented. Part Two outlines the pillars of operation and puts the timetable in perspective. Part Three indicates how the operation can grow with the layout — with emphasis on the solo operator. The final part describes how the timetable is translated into movements and how the operator can manage his time. Most material is applicable to group layouts.

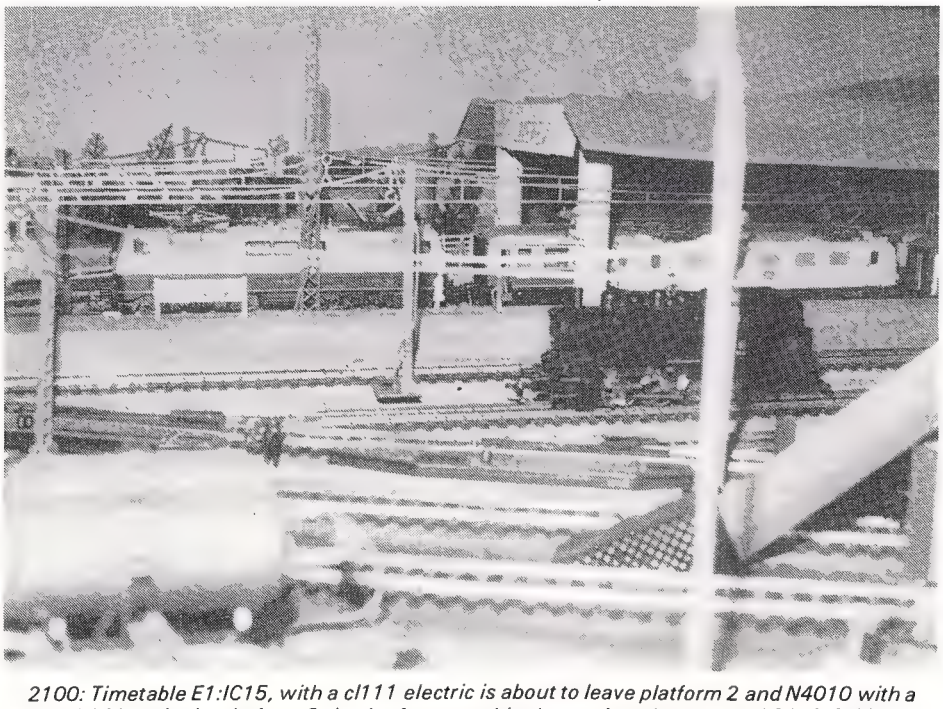
The extent of operation, or challenge, depends on the individual. But read on and try out some of what follows. You will never be able to retreat having once tried proper procedures. Just start slowly, learn, practice and increment item by item. The material is based on solo experience and thus complements other published material (usually American) which relates to group systems.

Warning!

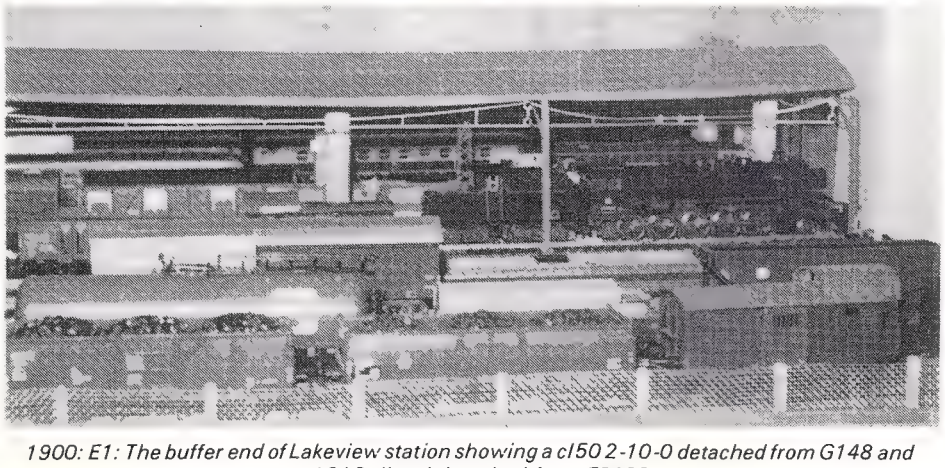
Do not be misled. Railway operation — at any scale — requires solution of an interlocking set of problems and the solution is never instant, easy or irrevocably complete. That is the source of fascination and operating systems are evolved living entities. An early start will ease the problems and increase the pleasure from the layout at all stages in its development.

Why have an operating system?

Some enthusiasts would answer, "because real railways have them". This is irrefutable but unsatisfactory since it is not obvious if this is possible or workable. There is a more practical answer; to make the most of our hobby and investment. Railways tie up much capital and investment time and no management would do this without purpose for the railway and chance of profit for the investors. Our model equipment should likewise make a profit by being used with interest, excitement and realism. We may not have paying customers but unless they are simulated our model will be bankrupt of purpose and lasting enjoyment. We satisfy a natural law if we use the equipment for its "intended" purpose, properly, although the level or emphasis chosen is individual.



2100: Timetable E1:IC15, with a cl111 electric is about to leave platform 2 and N4010 with a cl 141 waits in platform 3. In the foregound is the station shunter, a cl 81, 0-8-0T.



1900: E1: The buffer end of Lakeview station showing a cl50 2-10-0 detached from G148 and a cl 216 diesel detached from E3182.

Content of the operating code

Timetables are usually considered the key part of an operating system but are merely the most visible part. A successful timetable will be based on many factors and most are defined in the code. A code for our model must evaluate these factors as applied to our layout.

Every railway has a code of operation (rule book). It is necessary to ensure every employee knows his place and what is expected in given conditions. It also summarises data about the railway's permanent way, motive power, rolling stock and safety procedures. A typical code would also include information on load and speed restrictions, grades, train priority, composition rules, action after accidents or natural disasters, line under repair, punctuality, halt and turn around time, stock idiosyncrasies, train lists and normal compositions, maintenance, multiple heading, specials, signal-whistle-safety codes, fuel availability and current timetable.

A code for models

In the case of a model railway the operating code can have any of three forms.

1. Where the railway is carefully modelled on a piece of prototype, the actual code may be followed.
2. Where the railway is totally freelance the rules can be originals determined only by the peculiarities of layout and stock.
3. Where the layout is freelance but the stock is based on a real prototype — the very common case, like the Lakeland Railway with German Federal Railways (DB) stock — it is appropriate to develop a compound code which recognises both the realities of the layout and the rules pertinent to the stock.

Whichever applies, the basis of the code should be formulated before timetabling or there will be unnecessary alterations with probable collapse of both the timetable and desire to construct one.

Essential or cosmetic?

Review of the possible contents of the code will reveal that some items are clearly essential to any operation, whatever the scale, while others may be cosmetic on the model scale — such as whistle codes or staff duties (unless a group layout) — and may be made up at leisure. Some items affect running in a broad way — priority, station halts, composition rules etc — while others are fundamental. Line section speed/load limits and permanent way restrictions are key examples. How one's locomotives behave under load, at scale speeds, on the actual rails and grades of the layout must form the basis of the code. Each of these points is considered separately and some research will be required of the budding operator. But beware of widespread fallacies in books and seek

information from the closest sources or photographs.

I presume the reader to have an operable layout; its size, current scope and future development is not relevant. The following material is not arranged in order of importance but is intended to sketch the background for, and introduction of, timetabling.

My code

My operating system is comprehensive since I desired a total, realistic railway operation with a traffic density which not only looked good but which offered real challenge to maintain. My timetable is not all strain, but it can have its moments. Others may not desire this but the example may help, whatever your aim. The code is still being refined.

Layout

The layout of the Lakeland Railway is shown in Figure 1 to assist the reader with the examples given. It was designed to include as many features of a real railway as possible. The termini are operated with yard pilots or exchange locomotives; locos are uncoupled short of the buffers and run slightly forward. Stock can then be cleared with a shunter or used as consist for another train by coupling another loco. Only at Mountview can the same loco be used on the outgoing journey without clearing the stock first. The yards include humps to simplify shunting. Coaling, oiling, watering facilities are provided but are not universal.

The oval basis of the layout is necessary to provide breathing space. Simple end-end running does not use sufficient time to allow marshalling of new traffic, or give adequate impression of a long run, commensurate with layout capacity. Those with more placid low density desires could omit the oval. Service density was also the reason for the triple reverse loop concealed station, Montvale, which can accept or supply traffic without operator work. This artifice eases terminal work, permits more traffic and provides a major destination. Coherent operation has been possible throughout all stages of development.

Manual interference is only required for pantograph changes and accident repair. The control position is adjacent to two termini for easy pantograph changes and placed for optimal viewing of all stations, yards and junctions. The home yard extension may only be viewed from this position which also yields the best mirror sights of Mountview. Montvale is a light panel automatic station. The only normal reason to leave the control position is to change pantographs on electrics at the end of Platform 1 at Mountview. This happens five or six times per cycle.

Operational demands and running experience have led to minor track re-alignments; pointwork to Platform 2, Lakeview and radius expansion of the Lakeside bypass to Portlea (C to B, Figure 1). Locomotives are based at each terminus in the ratio 1:1:4, Mountview: Portlea: Lakeview. The main lines have four automatic blocks, and junction interlocks tied to the blocks, and each is capable of carrying up to three trains — two fully independent. The average loading is one train per line, peaking at 2 to 2.5. The mix of single line branches with termini and double main line oval acting as a traffic flywheel provides a basis for single-handed control of high traffic density with many train crossing situations.

All parts of the layout are readily accessible — accessability is essential in times of crisis and was the reason for the 'lake' which, besides giving the layout its name, provides a false floor.

Now, what can our code contain?

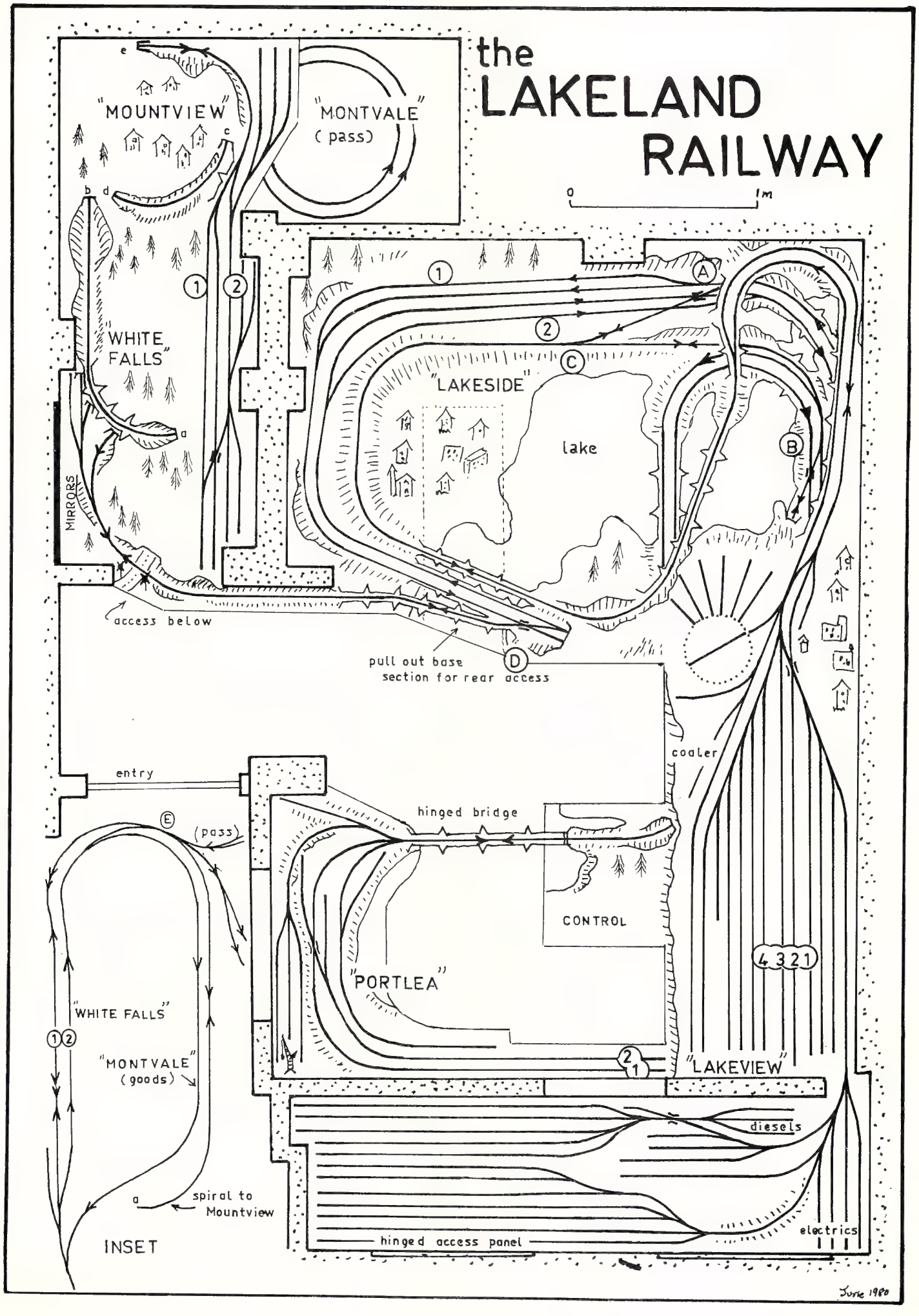
Some easy items

The fiction writer can have a field day setting up guidelines of staff organisation, duties, responsibilities, titles, chain of command, query reference, responses, maintenance instructions, work schedules, hours, rosters and so on. Many of these items may take much research or sight of an actual rule book for your prototype to compile. They can occupy a large portion of the manual and in lieu of original data some of it may be interim fiction. None is really essential to the model situation. The Lakeland Railway manual contains a skeleton of DB principles expanded for completeness. This can be updated annually as new material comes to hand. Similar comments apply to the safety code although specific aspects can be detailed — for signals, whistles, line repair, delays.

The first items to have relevance beyond the 'real' world will be matters affecting customers — punctuality, halt times, loading times and turn around times. (Of course if you run a group layout, staff organisation will be a critical simplification of the real thing — and just as important). Every railway pretends to be punctual and some succeed like my prototype. I use halt times ranging from 2 to 20 minutes; 2 or 3 for fast trains. Some variations from prototype may be necessary since we rarely have the stock for lengthy layovers or changes (passenger). Even so the Lakeland Railway does not allow stock to be cleared from a platform in less than ten minutes of arrival or re-used for another long run in under fifteen. These are minima never demanded in normal times. Similar comments apply to goods loadings and times range from 3-36+ hours according to demand, load type or site. Montvale is most critical in this respect being a reverse loop 'end' site. The five primary goods trains to service Montvale have 3-6 hours. These times can be cut by about one third after accidents or delays. Unit trains are allowed the least time. The time that can be allotted will depend on the number of trains run and this item will only be resolved (for goods traffic) with preparation of the timetable itself.

1230: E1: An unusual sight — a cl 141 detached from G145 in platform 1 at Mountview waiting for the train to be cleared. Ready in the next line is the consist of G146 which it will take over. (G145/146 are usually handled by cl 140 or 194 electrics). Clearly visible is the pointwork for running round a train when desired.

1554: E1: Container contract train G147 running down the Lakeview branch to the main line. All stock in the train is rated compatibly for 100 kph. In the background can be seen a special second part for D214 hauled by a cl 103 electric.


the
LAKELAND
RAILWAY
0
1m
"MOUNTVIEW"
"MONTVALE"
(pass)
"WHITE FALLS"
MIRRORS
"LAKESIDE"
lake
access below
pull out base
section for rear access
entry
hinged bridge
(pass)
CONTROL
"PORTLEA"
cooler
"LAKEVIEW"
diesels
electrics
hinged access panel
"WHITE FALLS"
"MONTVALE"
(goods)
spiral to
Mountview
INSET
June 1980

There are some more important subjects. Details on these are often available in the form of pocketbooks or extracts for enthusiasts.

Stock limits

Initial research will be to establish for the loco, coach, wagon classes represented on your railway normal working speeds, maximum allowed speeds, working loads, maximum loads, tare, loads for a given axle loading. These values should be tabulated. Normal working speeds are 70-90% of maxima and some margin is allowed for late starts, varied loads, delays en route and time make-up. The maximum permitted gazetted speeds are usually a little conservative but we modellers should not exceed them.

On the Lakeland Railway, following DB practice, small 3 axle coach stock is rated up to 100 kph, express stock to 140 kph and TEE/ Intercity stock from 160-200 kph. Goods stock fall into four basic categories; service wagons 60-80 kph, old four wheelers 80 kph, newer stock 100 kph, express stock 120 kph. This is only a slight reduction of prototype groups but any confusion supplied by brake, coupling or heating variations is ignored.

Composition rules

All railways have rules concerning the possible combinations of various types of stock. Most are common sense and relate to mixes of loaded/empty stock or brake, speed, coupling or leading axle requirements. For example, heavy or loaded wagons should appear behind the loco and light or empty wagons at the tail. This is especially good advice on model systems if we run long trains over our tighter curves. Realistic combinations result from research, sightings or study of photographs. A surprising variety occurs in every prototype. The composition rules are especially important in respect of the effect on train speed. The speed allowed a train is determined by the lowest rated stock and the loco load-speed rating should not exceed this lowest common denominator if possible. On the Lakeland Railway service trains and slow, heavy freights are either steam-hauled or allotted older electrics so that the 80-90 kph loco ratings are commensurate with stock ratings and maximum train speed (80 kph). This is not always possible but the attempt is made if power is available. As railways modernise and speeds rise, old stock is pensioned off. We can rarely afford to do this and must therefore accept a time blend of rules relevant to stock possessed and make the most/best of it.

0802: E1: Intercity service, IC11 "Southwind", on Lake Viaduct on a wintry Monday. This service includes car transporters on Winter week days. All stock and loco match rated to 160 kph.

1900: E1: The "Valkyrie" (IC13) at Mountview, its cl 103 loco detached. The consist for G130 waits on the adjacent line ready for later pick up.

Signalling

Allied to the signal code is the whistle and safety code (including flags, lights or staffs). Rarely do modellers incorporate (or wives allow) whistles — and the Lakeland Railway is no exception. But a signal code is important and the Lakeland Railway uses the DB colour light signal system with only minor modification. Due to space limits some distants are omitted and some junction and block homes are clustered for isolating section convenience. Signals make a railway look right, especially is they work properly. Research is rarely difficult if the system is modern rather than semaphore. The manual should spell out the system, its usage and installation as well as the whistle code and emergency safety rules.

Train length, load

Most railways specify train length maxima, often by routes or line sections. Platform length, loop length are usual controls. The DB limits the number of coaches by platform length at run ends or a set number of axles (80). This type of rule will be familiar to the modeller, it is very practical. On the Lakeland Railway the absolute limit is 7 coaches (36 axles any stock) but only Lakeview, Portlea and Montvale can cope with the maximum. Loops at Lakeside and White Falls can accept a six coach equivalence but Mountview only five. All general line segments and block resets allow for the maximum plus locomotive. While we may often approximate passenger loadings, even with only three coaches, we can seldon equate goods trains or their loads. On the Lakeland Railway there are no axle load restrictions and if a wagon is said to be loaded it 'carries' its maximum load to minimise arithmetic. Loading of trains is tied to train speed and this topic is examined in part II.

Exceptional services

If an abnormal demand arises and the resultant train exceeds length/load rules and line restrictions then the train must be run in two parts. Special instructions can be framed and transmitted to protect the extra traffic. Duplicates or parts are run 15 minutes apart on the Lakeland Railway and the timetable is constructed in a way which allows this without significant dislocation. Specials are treated in the same way. How such conditions arise is detailed in Part III.

Mutliple heading is relatively rare on the DB due to increasingly adequate loco power. It is rarer on the Lakeland Railway and rules are extant for combinations of cl 216 diesels only. The prototype manual for the DB lists many types of pairings; many involve nearly extinct steam locos.

Train priority

If various types of train are run and can cross then situations will arise where decisions must be planned or made quickly as to which train goes first. Research will reveal how your prototype behaves and the clue is often given in train letter and number codes. On the Lakeland Railway I use a simplification of the DB system; six classes instead of more than twenty — mostly goods or specialised. The table lists the classes on the Lakeland Railway. Normal priority is in the order given but due to the particular requirements of the Lakeland goods system (described in AMRM, Jan/Feb 1981), goods services move into second rating (according to first numeral in code) after major delays. This is why the DB goods system numbers are not used.

Train Priority

TEE/IC	xx Top rank high speed limiteds	e.g. IC 15
D	2xx Second rank high speed expresses	e.g. D 213
E	3xxx Long distance express unlimiteds	e.g. E 3375
N	4xxx Local/short range services	e.g. N 4008
	Railcar	e.g. C
G	1xx Goods services	e.g. G 151

Up/even; Down/odd. Up: priority.
Priority within a class by lower numbers.

Special situations

Many rules will be devoted to what is to happen when the line is under repair, an accident has occurred, trains are delayed or the line is blocked. Automatic systems may protect the trains and then be manually overridden to keep some traffic flowing. Goods or local traffic may be temporarily sidelined. On the Lakeland Railway speed restrictions or short stops apply when the line is under repair. This may mean, depending on line section, that all trains run late for a period.

An accident is a different matter. The clock runs on . . . Stock involved can only be re-railed by the great helper after a breakdown crane has been run to the scene (or as near as possible). When the line is cleared all delayed trains complete their journeys. But what about scheduled traffic never started? When, how to restore the timetable? Some trains may be cancelled. The Lakeland Railway uses a 90 minute threshhold. If the delay is less, everything runs in order but with the minimum allowed turnaround until the timetable is restored. If the delay is more the operator may opt to continue all traffic or cancel selectively All will depend on the time of day as to which course will promote the most rapid restoration. If there are to be cancellations IC and G trains are excluded. These must run.

Similar conditions apply in case of natural disasters whose origin is described in Part III. The manual will expand on staff duties, lineside protections and Boards of Enquiry in all these situations. It is as important for the modeller to investigate accidents as it is for his prototype and all enquiries should be thorough.

Supplies

The code will list where oil, coal, water, sand can be obtained. On the Lakeland Railway coal is 'available' at Montvale and Lakeview; water at Portlea as well; oil at Mountview, Montvale and Lakeview and sand at all sites. Availability of supplies can impose restrictions on loco usage and train working and demands attention when preparing the loco roster. Thus steam locos are not now used on the Mountview Branch in normal service; and for special cases must be serviced at Montvale first.

Summary

The above factors will affect the direct operation of the railway but the effect is minor when contrasted with the impact of the permanent way. All will be relevant after the construction of the timetable yet only halt times, turnaround restrictions and speed limits will play any part in its production. The permanent way items depend totally on the layout and are unique for each railway. Such items shape the character and scope of the timetable, and are covered in Part II. But even at this stage you can possess much information and obtaining it, using some of it, will teach much more about railway operation irrespective of scale.

LIVERIES & NAMES

Neil Cram details the various liveries and names carried by steam locomotives on the N.S.W.R.

Having always expressed admiration for coloured steam locomotives the locomotive liveries of the N.S.W.G.R. has always been a favourite topic of mine for research. This subject was dealt with in terms far more adequately than I could express in an article under the above name in Bulletin No. 150 of April 1950 of The Australian Railway Historical Society. The author of the article is not shown but I am informed by The Bulletin Editor "Mal Park was the man behind the pen, but of course we now have no way of knowing whether the surname is correct or not." With the Editor's kind permission I have permission to publish the article and then add further information that has since come to light, but reference is made to steam locomotives only, to remain in keeping with the original article.

In the early days of New South Wales Railways, particular attention was paid to the appearance of the motive power. Engines, in those days, were painted in middle green, had black smokeboxes, and were suitably lined out in black and white. Wheels were painted green, and buffer beams vermilion. All brass work was polished, as were dome and funnel cappings.

This practice remained in force for more than thirty years, until about the nineties, when all engines were painted black. Brass work was still kept well polished, but in most cases the domes were painted over. Probably a contributing cause was the use of cast iron in dome construction.

Although locomotive liveries were kept spic and span, the British custom of naming locomotives was not followed very closely. In fact, through the first fifty years of the New South Wales Railways only six engines carried names. First was Governor General — this was originally a contractor's engine, was sold by William Randle in 1856 to the Railway Department, and was given road number 5. (See Bulletin No. 129, page 1). The three tank engines imported for working the Richmond Branch in 1864 carried the names Windsor, Richmond and Sydney. Another similar engine was called Pioneer, and had been purchased from Brassey and Ballard, contractors, in the same year. All these tank engines were fully dealt with in Bulletin No. 136 page 85. The only other named engines that the writer can call to mind were Wollondilly and The Buck. Both these engines were imported by contractors, and, when purchased by the New South Wales Railways in 1874 and 1872 respectively, were given road numbers 66 and 20N. All these engines, with the possible exception of Pioneer, lost their names fairly early in the piece.

First diversion from the black livery of the nineties appears to have been made when the late Duke of Windsor visited Australia as Prince of Wales in 1920. The Royal train was brought out of moth balls and the engines assigned to its working were painted Royal Blue. These were as follows:— P-6 (now 32) class — Nos. 11 (now 3205), 12 (3206), 707 (3360), 710 (3368), 725 (3383), 798 (3314), 799 (3315), and 851 (3351); NN (now 35) class — Nos. 1312 (3524) and 1315 (3527) and S-636 (now 30) class No. 663 (3028).

As a matter of interest all the 32 class engines, with the exception of Nos. 3205 and 3351, used saturated steam and that No. 3028 was used to work the Royal Train to Richmond and back.

Following the conclusion of the Royal visit, the engines were "let go" and very soon resumed their normal state of blackness.

The next Royal visit was that of the Duke and Duchess of York (later King George VI and Queen Elizabeth), on the occasion of the opening of the first Federal Parliament at Canberra in 1927. Again the Royal Blue livery appeared, and the engines assigned to work "RL", (the official code for the Royal Train), were as follows:— 32 class Nos. 3316, 3329, 3332, 3339, 3360, and 3369; 36 class, Nos. 3602, 3615, 3616 and 3617. Like their predecessors, these engines failed to keep the blue livery, and were permitted to go back to the normal black colours.

During the years 1929-40 some great changes in the colour schemes for passenger cars were made and distinctive colours were used on special trains, such as red and cream for the Newcastle expresses, blue and cream for the Caves express, and green and cream on the Illawarra.

When the Newcastle and Caves expresses were inaugurated on November 11, 1929, Engine Nos. 3266, 3307, 3366 and 3380 (Eveleigh), 3205, 3250, 3313 and 3320 (Broadmeadow) were assigned to these services. These engines were painted black with a star on the smokebox, and had buffers and motion polished. Red and blue classification lights were also used on these services while the writer remembers 3313 carrying a board painted "Express" over the buffer beam. No. 3307 worked the first Caves express while No. 3205 did the honours with the N.C.L. express to Newcastle.

During 1929-30, the 35 (old NN) class engines were showing their paces on the Western line with the Fish, and No. 3535 was specially painted black and lined out in red and yellow for this service in the middle of 1930. Tests were made in the winter of 1931 with 35 class engines on the Caves express and on November 16, 1931, 3535 took out the Caves express on a new accelerated schedule.

Colour was certainly returning to the railway. In May 1933 a new CUB car set was painted green and cream for the South Coast service and to match the train two 32 class engines, Nos. 3306 and 3374, brought back many old memories when they appeared in pastoral green. In addition, these engines carried the names Illawarra and Cambewarra, this reviving a practice which had lapsed for more than 60 years.

Once started, distinctive colours for passenger locomotives took on, and the next stage was the painting of two more engines, Nos. 3365 and 3277, in a deep maroon colour for the Newcastle expresses. This was completed in July, 1933, and in the following month Nos. 3298 and 3201 were similarly painted, and the four engines carried the names Hunter, Hawkesbury, Parramatta and Wyong respectively.

Meanwhile the Caves express was not neglected, and No. 3506 emerged from the paint shop resplendent in a striking blue late in July 1933. She was followed by 3535 in September and 3526 in December and all three engines worked both the Caves express and The Fish. None of the 35 class engines, however, carried names.

With the "red" engines taking over the working of the Newcastle express, Nos. 3313 and 3323 and 3354 which had been enamelled black with red lining, were transferred to Casino for the Brisbane express working. Here, these engines received the names Queenslander, Yerrongpilly and Beaudesert,

respectively, in August, September and October 1933.

On October 13, 1933 suburban travellers found another green 32 class engine in their midst. This was No. 3300, which demonstrated the good painting efforts of Bathurst shed, and was appropriately named Carillon City. For running the Dubbo day train (now the Central West express), 3300 was later assisted by green-painted 3239 Macquarie and 3343 Canobolas, which appeared in December, 1933 and January, 1934, respectively.

So far nobody had got around to painting one of the "Pigs," 36 class to the uninitiated, but this was soon remembered when 3633 left the paint shop in February, 1934 and was assigned to work the Southern Highlands express.

Melbourne's centenary in 1934, which brought the Duke of Gloucester on his first visit to these shores was responsible for a lot of engine painting and cleaning in connection with the running of RL, and the fleet of green engines was increased as follows:— 32 class, Nos. 3266, 3310, 3339 and 3380; 36 class, Nos. 3608, 3609, and 3652.

All these engines retained their green livery when they went back to ordinary working, and when the 36 class engines took over the working of the Newcastle expresses as from October 15, 1934, painted engines were usually assigned to this working. In addition, Nos. 3608 and 3609 took over the names Hunter and Hawkesbury from the "red" 32 class engines which went back into ordinary service, and later were repainted black, with the exception of No. 3277, which was repainted in the standard green livery.

In the year 1935 three green 32 class engines, Nos. 3239, 3310 and 3343, were transferred to Casino for the Brisbane working and took over the names Beaudesert, Queenslander and Yerrongpilly; the former names Macquarie (3239) and Canobolas (3343) being abandoned.

About the same time 3300 lost the name Carillon City, and was allowed to go black.

On November 4, 1935, 36 class engines took over the working of the Caves express and The Fish, and the blue 35 class engines displaced from this service were later repainted black.

The policy of painting passenger engines was continued, and at the end of March, 1939, seventeen 32 class engines and twenty-nine 36 class engines had assumed the standard green livery.

During this time the 35 class engines were passing through the shops, and were being fitted with new frames and cabs, and, as the work was completed, several of the engines came out in the standard green colour scheme — 11 having been painted as of the end of March, 1939.

During the first seven years before World War II, accelerated passenger services were provided on the more important country branch lines, and these were worked by C-79 (now 12) class 4-4-0 engines. In 1935, one of these engines, No. 1214 revived memories of old railwaymen when she emerged from the paint shop in the standard green livery, later followed by 1210 and 1245. Possibly, the only complaint on their appearance was that their domes were not polished! Through the first two years of the war more engines were painted, and at the end of March, 1942, the following engines had been painted; 12 class, three engines, 32 class, 32 engines, 34 class, one engine; 35 class, 26 engines; 36 class, 29 engines.

With difficulties of war-time operation and the shortage of staff, their glory soon began to fade, and at war's end only a few engines showed any trace of their old green colouring, and it was one of these, No. 3374, which worked the last train over the old Hawkesbury Bridge on July 1, 1946.

When the last batch of streamlined 38 class engines came out in 1943-45 they were painted an austerity shop grey, and did not receive their present green livery until 1946-48. The non-streamlined engines of this class, however, were painted green (Nos. 3806-10 were green and black, and others all green), soon after their running trials had been completed and today the 38 class engines are the only distinctively painted passenger engines working on the New South Wales Railways.

No mention is made in the original article of the two locomotives of the U-105 class. This Class of locomotive was typical American 4-4-0's being built by Baldwin Locomotive Works and were given road numbers 105 and 130. No. 105 was placed in service in 1877 "was lagged with wood and was covered with a Russian iron jacket, which was strapped together with brass bands." The colour of Russian iron is hard to describe but can be likened to the blue-grey of a new hacksaw blade. No. 130 was placed in service in April 1879 "it is understood that this engine was painted chocolate and lined out in black (Note A).

To amplify prior statements where numbers of a class of locomotives are stated and not the locomotive numbers, the following applies:— By September 1937 the following C36 Class locomotives had been painted green and lined in black:— 3608, 3609, 3611, 3613, 3619, 3628, 3629, 3633, 3635, 3637, 3638, 3640, 3642, 3643, 3644, 3652, 3653, 3672, 3673 and 3674 (Note B).

The standard livery for passenger locomotives was green and black, lined out in red, yellow and white; freight locomotives were a sombre black with red buffer beams fore and aft and (usually) polished brass numbers. By March 1939 the following locomotives were painted in this new livery:—

32 Class Nos. 3221, 3229, 3237, 3240, 3251, 3266, 3277, 3283, 3289, 3290, 3306, 3310, 3339, 3343, 3352, 3374 and 3380.

35 Class Nos. 3503, 3505, 3514, 3516, 3517, 3519, 3521, 3527, 3528, 3529, 3530.

36 Class Nos. 3603, 3608, 3609, 3611, 3613, 3616, 3619, 3621, 3628, 3629, 3633, 3635, 3637, 3638, 3640, 3642, 3643, 3644, 3649, 3652, 3653, 3660, 3661, 3666, 3667, 3669, 3671, 3672, 3673, and 3674.

As at the 31st March, 1942 the following locomotives were painted in standard green livery:—

12 Class Nos. 1210, 1214, 1245.

32 Class Nos. 3207, 3214, 3218, 3221, 3227, 3229, 3233, 3236, 3237, 3240, 3242, 3243, 3245, 3246, 3251, 3252, 3262, 3268, 3277, 3281, 3283, 3289, 3290, 3294, 3295, 3306, 3324, 3352, 3374, 3378 and 3380.

34 Class Nos. 3403.

35 Class Nos. 3501, 3512, 3514, 3516, 3517, 3519, 3520, 3521, 3522, 3524, 3525, 3526, 3527, 3528, 3529, 3530, 3534, 3535.

36 Class Nos. 3603, 3608, 3609, 3611, 3613, 3616, 3619, 3628, 3629, 3633, 3635, 3637, 3638, 3640, 3642, 3643, 3644, 3649, 3652, 3653, 3660, 3661, 3666, 3667, 3669, 3671, 3672, 3673 and 3674 (Note D).

That article was published in April, 1950. Since then, as the 38 class locomotives came up for repainting they were painted standard black, with the exception of 3813 which remained green throughout its life.

In conjunction with the Railway's Centenary Celebrations in September, 1955, 1243 was displayed and had been repainted green and lined in white. This locomotive became the first of the vintage train locomotives. 1210 was painted green in 1959 and became an additional vintage train locomotive until 1962 when it was transferred to Canberra for preservation. 1709 replaced 1210 and was painted green in August, 1962. In February, 1970 1709 was repainted carnation red.

1301 became an additional vintage train locomotive and during October, 1963 was painted green (Note E).

3616 the only locomotive to be fitted with a giesl oblong ejector was painted green and lined red. During the time it was used in conjunction with a vintage train prior to the demise of the vintage train in 1974, when it was transferred to the New South Wales Transport Museum.

The pride of the New South Wales Government Railway Locomotive Fleet 3801 was repainted green in 1966 and remained in that colour, though on occasions different shades, until it was transferred at the end of its life to the New South Wales Transport Museum.

There have been examples of other engines being painted e.g. 3028 (Blue) and 3144 (green) but these do not come within official painting schemes. This action is credited to the enthusiasm of the depot staff where these locomotives were stationed.

NOTE (A) Australian Railway Historical Society Bulletin No. 158.
(B) Australian Railway Historical Society Bulletin Nov. 1937.
(C) Australian Railway Historical Society Bulletin March 1939.
(D) Australian Railway Historical Society Bulletin May 1942.
(E) Australian Railway Historical Society Bulletin October 1975.

PASSENGER TRAIN CROSSING

If you have a single platform through station, try scheduling passenger trains to cross there.

The Victorian Railways used to have this problem at Greensborough on the suburban network. It was the staff exchange point for the Macleod-Greensborough and Greensborough-Eltham sections.

The first train to arrive would pull into the platform to pick up and set down passengers, and also hand over the staff. It would then back out past the home signal, and pull into the number 2 road to await the other train.

When the second train arrived normal staff exchange and passenger requirements were performed.

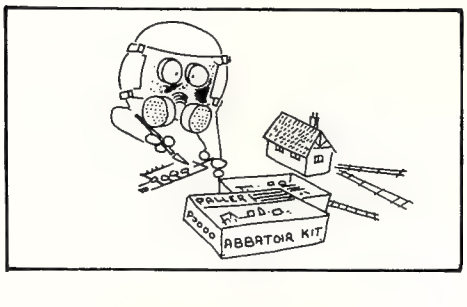
After the departure of the second train, the staff was given to the driver of the first train, which departed from number 2 road.

The timetable was arranged so that the train with the lesser number of passengers arrived first. This meant that in the morning peak period down trains backed out, and up trains backed out during the evening peak.

Late trains of course meant that at times a train load of commuters had to sit in the siding to wait for an almost empty train to arrive.

Passing the staff to the train in number 2 road was usually achieved by the driver opening his cab door, and the station personnel then throwing the cane hoop with staff strapped in place through the doorway. At least that was the idea, it didn't always work out that way.

Phil Jeffery



NON-ISO CONTAINERS

SUNSHINE BISCUITS

Basic research has identified at least twelve different types of containers to be covered. Details for MacRobertson's chocolate, Dyer's Transport, KCC bulk cement, Wridgways "Homepack", and Vicrail PS containers have been assembled so far.

Tallow, glucose, and GMH jumbo containers, along with standard 7 foot liquid containers, transport company containers, flexi-vans, and refrigerated containers have yet to be researched. Contributions and information from readers familiar with any of these would be appreciated.

This is the first of a series of articles by Phil Jeffery covering non-ISO containers carried by the Victorian Railways.

The original caption for the photo above started "to the railways movement of goods in containers is old hat . . .", that is indeed so. A VR Newsletter article on containers stated that the first railway containers were when private carriages and wagons were lifted off their chassis and placed on railway flat cars, back in the 1820s!

Research into Victorian Railways containers led to this 1925 Sunshine Biscuits container. Its dimensions were 8 feet long, 7 feet wide, with a height of 6 feet 3 inches at the side, and 6 feet 6 inches at the centre.

The colour of the container is a mystery, but the Sunshine Biscuit company colours, as used on biscuit packets of the period, were chocolate brown and yellow. It could well be that the container was painted in these colours.

Lettering on the container is also interesting, look at the photograph again. Four different renditions of the letter S, and two varieties of U! The other side of the container was probably different again.

The photo at top of page is a 1925 photograph showing a consignment of Sunshine biscuits from Ballarat being unloaded at Melbourne.

(V.R. photograph 108/14)

PHOTOGRAPHICALLY SPEAKING
CONDUCTED by Leon Oberg

This issue the author alters his usual approach to this column and brings readers a story dealing with a recent trip beyond Marree which took-in the now abandoned 1067mm gauge line to Alice Springs. All pictures are by the columnist and were taken with a Nikkormat EL camera using 28mm, 50 and 135mm lenses and shot on Ilford FP4 film rated at 200 asa.

ON SAFARI IN THE WILDERNESS

Until recently, I was like a large number of rail enthusiasts who have considered the centre of Australia to be an arid, featureless wasteland of flat country for endless kilometre after kilometre. And an area where trains were scarce.

For these reasons I have refrained from visiting this region for rail pictures but with the projected closure of the ANR Central Australia Railway in favour of a new standard gauge line from Tarcoola to Alice Springs, two associates and I assaulted the old narrow gauge line in a "big-way" in February 1980.

And how wrong I was regarding its featureless terrain! Countless bridges, delightful cuttings, sand dunes, salt bush and often rugged backgrounds made this now closed railway a rail photographer's paradise.

Add to these facts the leisurely pace of the trains (about 30 km/h maximum), and it was a line where one could really thrive, for despite many tales, even the roads were reasonable.

The tour into this wilderness country actually took associates, modeller Bob Richardson, photographer Peter Watts and I on an extremely hard 6000 km "fairy story" few weeks of rail photography which included shooting in Victoria, South Australia (the old SAR and CR routes) and Western NSW. It also included impressive sessions with a number of private operations.

Often photographing from dawn to 11 p.m. at night, the three of us shot more than 3,500 colour and monochrome pictures in various formats on a trip which we dubbed *"The Great Diesel Safari of 1980"*.

When planning the excursion north of Marree (the gauge transfer point for the ANR's old Alice Springs link), we were ever conscious of tales revealing that "no trains run for days, and when they do, they run at night". But we decided to take the risk anyway, agreeing that if necessary we would shoot all night.

So, after capturing pictures of triple ex SAR 900's in the wild in the Adelaide area (and in perfect light), and experiencing the thrill of five-header ANR CLs and GMs bellowing through the viewfinders in the Port Pirie area, we finally left Port Augusta for the north, soon after dawn. We were told moments before we left that an empty coal train had departed Stirling North an hour earlier (it was a special and would not normally be on), so we made Brachina our pick-up point.

Would you all believe that the second we reached the railway after 1 hour 30 minutes drive, that this train's headlight came into view not two kilometres away! So we "had a chase" all the way to Leigh Creek.

On arrival at Marree early in the afternoon, we were just in time to organise ourselves for a CL-class departure for Stirling North.

After we tired of this we knew that an NT-class narrow gauge loco was to depart Marree for the North and upon warning the loco crew that we intended chasing his train hard until dark (about four hours) we began our tremendous association of this line with a photo on a delightful timber trestle just outside Marree.

Over the following hundred or so kilometres we shot the train (NT74 in the lead) from bit cuttings, old steam locomotive water tank stands, over cracked and dry salt beds and trundling through some dead flat plains and sand dunes.

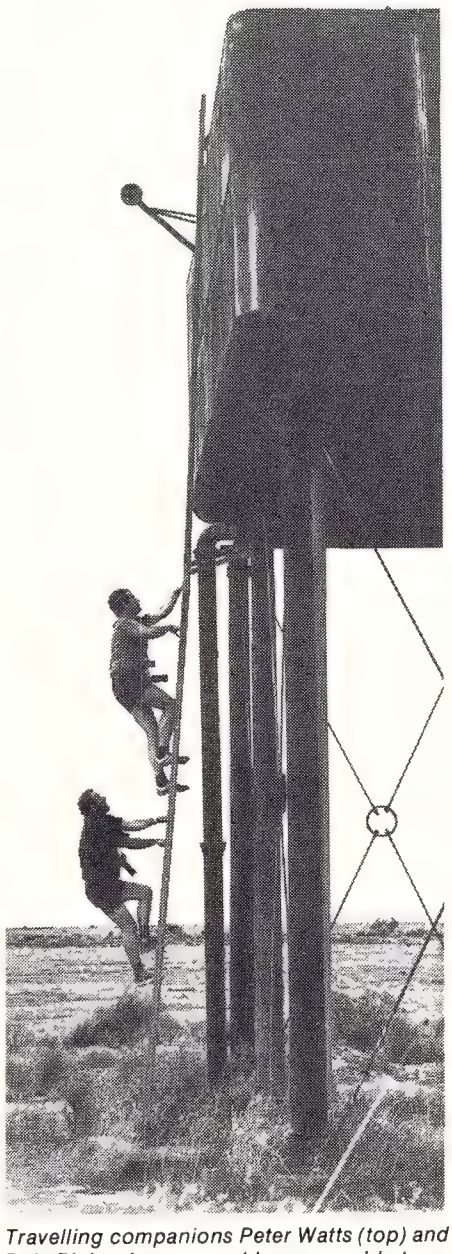
The varying picture taking opportunities including dramatic silhouettes never ceased!

A spare crew in the accommodation/brake van meanwhile had come to life at our consistent antics (not unusual among enthusiasts of course), and one drawled to Bob, *"Jee's, youse blokes must be Queers!"*

(After some hours at this, one tends to wonder if he was right, but upon receiving the results much later, wer have the last laugh).

By dark we were really in "no-mans land" for the southern tip of Lake Eyre had long been seen. Finally we located a ganger's camp near an otherwise lonely railway station. He and his two Aboriginal staff (one of whom was a cook) treated us like kings.

Bacon and Eggs all around for breakfast and an early morning call to control for the Up



Travelling companions Peter Watts (top) and Bob Richardson scramble up an old steam locomotive water tank for an elevated aspect of a narrow-gauge movement at Callanna.

NT74 starts rolling off a delightful trestle just out of Marree to mark the start of our motor-cade with this consist up the old narrow-gauge. This picture was taken with a 28mm wide angle lens.

Above: *A mood shot showing ANR narrow-gauge unit NT74 crossing Gregory Creek bridge (sited about 507 km from Port Pirie) with an Alice Springs bound freight train in February 1980.*

running brought the news that a Marree-bound mail would be upon us within the hour.

And sure enough, out of the desert rolled another four hours' subsequent entertainment to the tune of Clyde-built NJ5 leading (yesterday's) NT74 which had failed somewhere up the line during the night. (We thought it had been running pretty dull the day before). In fact it was a good thing for us that the NT did fail for if it had not, the NJ would have passed us by during the dark.

The NJ (which incidentally sounded under load like a NSWPTC 421-class), set a trifle better pace, but still we managed countless new angles and settings.

Arrival back into Marree co-incided with further intensive action with some standard gauge CL-class movements, two more NTs and an NSU at work, or preparing trains for dispatch.

Our "expected dull moments in this area" were just figments of our imaginations for we were hard pressed to find time for a decent lunch before the NSU + NT was to depart North again.

And so our operations continued. Even during our return to Port Augusta we found no retardation in the action for although it was impossible in Marree (due to pressures of work by station staff) to find out if any coal movements were out of Leigh Creek at a convenient time, we were staggered near Copley to see a rising cloud of black dust in the distance which could only be an Up coal train.

Sure enough we had caught one with a pair of GMs rolling very fast and, as a result enjoyed a further session with them as far as Brachina.

Here we boiled the billy and prepared for the Down Ghan which duly arrived, (complete with motorcading TV film crew) with early series GM6 at the helm.

Off we set, heading north again. Our repeated "photo stops" soon attracted the attention of the entire passenger load and before long tourists from both sides of the carriages were cramming the windows on one side. Even the cooks and train staff were crowding open doors for their glimpse of three enthusiasts conducting a "hard-core" chase in true rally-car tradition.

After we finally returned to Port Augusta and decided to lose ourselves on the Trans line west of that point, one of the very first trains we received was a real scoop. It was the

Continued on page 25.

NJ5 and dead NT74 leave Callanna with this Marree-bound mixed-mail train. To give some idea how slow the trains used to run over this line we took a picture at Callanna station (see accompanying water tower picture) and were able to catch the train and shoot this picture with Callanna still in camera range! A 135mm medium tele was used with this picture.

NT74 roars through ruggedly hilly terrain near Bopeechee with its north-bound freight drag. (For those technically inclined, the light here was so bad the picture was shot at 250th at 13.5 with 200 ASA FP4 film.)

No. 2 photographed at Kalangadoo in the south-east of S.A. Photo by courtesy National Trust, Mt. Gambier

"THE COFFEE POT"

By Hugh Williams

If you model a short Narrow Gauge branch line and happen to be looking for something to use on a passenger service, then this small Steam Motor Coach known as "The Coffee Pot" might be just what you are looking for.

One of the more unique and historic pieces of rolling stock to survive the passage of time is a small Steam Motor Coach which is the subject of the accompanying plan. Known as "The Coffee Pot", this steam railmotor is unique because it is thought to be the only one of its type still in existence, although a steam coach which exhibits the same principles, but which is in no way similar in physical appearance, is on static display in Ireland. To many Australians, the Coffee Pot would be better known as the quaint little engine that used to be on display at the Alice Springs Railway Station. However, after about fifteen years up in the Centre, the steam motor coach was returned to its former home at Quorn where members of the Pichi Richi Railway Preservation Society are currently (1980) restoring it to its original condition and to full working order. It will be a sight indeed to see the locomotive moving under its own power again after spending the best part of fifty years out of service.

HISTORY

The South Australian Railways originally introduced two Steam Motor Coaches in August 1906 to improve branch line services on two of the narrow gauge divisions. No. 1 went to the Great Northern Division and was allocated to the Quorn Depot, while No. 2, a slightly longer unit was sent to the narrow gauge division in the South East of South Australia. The locomotive sections of Nos 1 and 2 were built by Kitson & Co Limited of Leeds in 1905 and 1906 respectively and the coach sections were built by the Metropolitan Amalgamated Railway Carriage and Wagon Company Ltd of Birmingham.

No. 1 was allocated to the Quorn depot for all of its working life which covered the period from 1906 until about 1933. Its regular duty was a weekly trip to Hawker, leaving Quorn at 6.45 pm on Wednesday evenings and returning from Hawker at 5.55 am on Thursday mornings. Both movements connected at Quorn with the Adelaide train, which of course, involved changing trains a second time at the break of gauge station Terowie. According to a 1923 timetable, the running time for the 41 miles from Quorn to Hawker was 111 minutes giving an average speed of 22 mph.

In 1921, the Commonwealth Railways took over the narrow gauge line from Port Augusta to Oodnadatta, and included in their purchase was the Coffee Pot. It was not until 1926 that the Commonwealth Railways took over the operation of the line and it was about that time that No. 1 was given the classification NJAB 1.

About 1927 the Commonwealth Railways rebored the cylinders and fitted oversized piston rings because the cylinders had become worn. This alteration resulted in the use of more water on the regular Hawker run and to cater for this, a 375 gallon tank was built inside the second class compartment of the coach to supplement the loco's existing water supply.

The Coffee Pot ceased service in either 1932 or 1933 and the late George Williams of Port Augusta believed that he was the fireman on the loco for its last trip. He wrote that they were returning to Quorn on the usual Thursday morning trip when the right hand piston gland blew out. The train was about fifteen miles from Quorn at the time. While the guard rang Quorn to advise them of a temporary failure, he and the driver effected some running repairs by utilising a lock nut from the left hand gland plus a small amount of fencing wire that happened to be close handy at the time. (Try fixing a diesel like that!) She finished the trip under her own power, but was probably not used again after that.

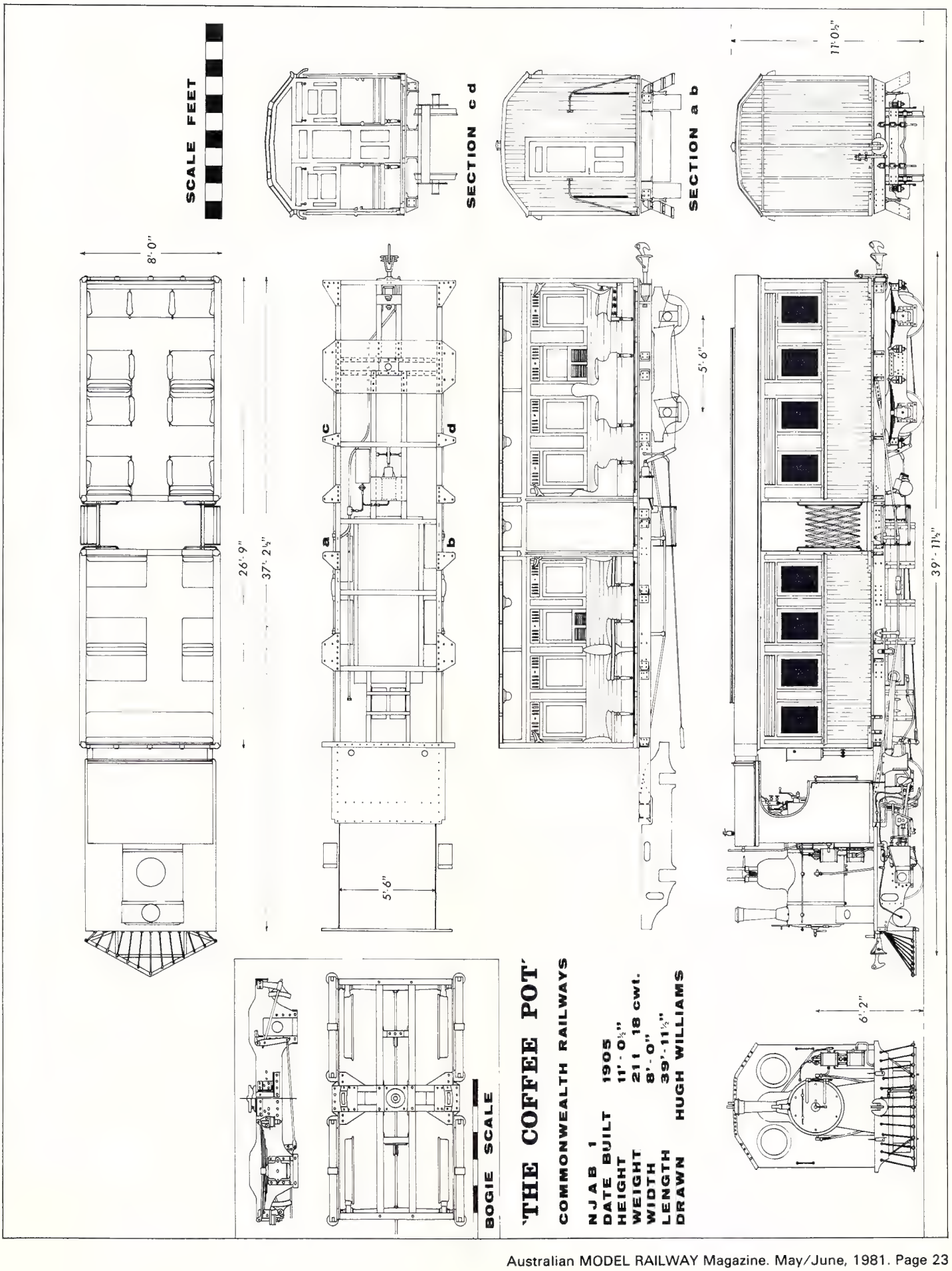
Apparently the Coffee Pot was kept in working order just in case it was required, as for several years it was steamed up twice a year and washed out at regular intervals. Pichi Richi members undertaking the restoration of the loco think that the boiler may have been repaired as well, as there are several tubes in the boiler which do not appear to have been used.

Very little is known about the activities of No. 2 which was sent to the "South East" division. Although it is believed to have run between Mt. Gambier and Beachport, photos also show this unit at Naracoorte and Kalangadoo. It is reported that in later years of its life it was used as a passenger coach on locomotive hauled trains; the connecting rods being removed for these workings. This of course gives modellers an "out" if you do happen to build a model, but have trouble powering the unit. The loco was eventually sold to S.J. Stuckey and Son in early 1936, who used the engine unit for shunting at Beachport. Because the water supply for the loco was situated under the coach section, the loco's conversion to a shunting engine consisted of adding a floor to the cab and a galvanised iron water tank to the back of the cab. Part of the carriage of No. 2 was located in the South East, and the owners generously allowed Pichi Richi members to use some of the salvagable parts to help restore No. 1.

Description

The Coffee Pot consists of two main parts; the engine unit and the passenger coach, the latter pivoting about a point 1' 8" in front of the driving axle. The coach frame extends forward from the coach body and pivots on the engine frame beneath the firebox. As the floor of the cab is mounted on the coach frame, the crew in the cab would experience some movement between the floor and the rest of boiler and cab superstructure.

The locomotive frame is 5' 6" wide and both side frames are made of ⅝th inch plate steel. Springs for the loco's wheel are situated immediately inside the frame. Walschaerts valve gear is used and only the rear axle of the engine unit is driven which presumably makes the loco a 2-2-0. The coal for the locomotive is stored inside the cab, forward of the footplate and between the firebox and the right-hand side of the cab. Water for the unit is stored in a 200 gallon tank mounted under the frame of the carriage. Not shown in the plan is an extra water tank which was fitted to the inside front



Photos by Hugh Williams and Peter Felhlberg

"THE COFFEE POT"

of the second class compartment in 1927. This tank held 375 gallons and utilised the space formerly occupied by four seats which are shown as a bench seat across the full width of the coach.

Six battery boxes are situated under the floor of the carriage section. These must have been more than adequate for the needs of the 10 globes that the coach contained, especially when a generator under the floor of the coach also provided power for the system. We should remember of course, that electric light was very much in its infancy in 1906 and the designers of the carriage no doubt wanted to ensure that there would be an adequate supply of power at all times. The power supply ran up the centre entrance of the carriage through a large switch box and onto the roof where conduits, protected by a wooden frame, ran to each of the lights.

The coach was finished in stained and varnished timber, both inside and out. Externally, tongue and grooved board is featured on the sides up to window level and on the rear of the body. The front of the coach is covered with steel sheathing which forms the back wall of the cab. Louvred awnings are fitted above the windows, and the Mansard roof design matches that of the locomotive cab. Entrance to the carriage is gained by a centrally located passage which divides it into first (rear) and second (forward) class compartments.

The interior of the first class compartment has elaborate pressed ceiling patterns and as might be expected, there were no such embellishments for second class passengers. Seating was originally framed in stained timber and upholstered with mock leather while the floor covering was linoleum. As built, 13 people could sit in the second class compartment while 9 were catered for in the first class compartment.

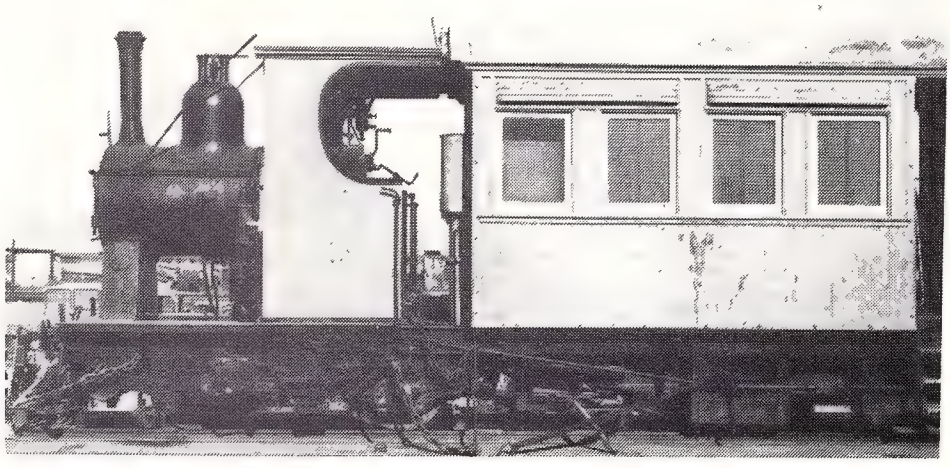
Colour scheme of the units was reported to have been stained dark oak on the body with a light stone colour canvas roof. The cab exterior, boiler and dome were reddish brown and the smokebox underframe, cab interior and bufferbeam were all black. Motion gear, cab fittings and hand rails remained polished metal. Many of the old photos of the Coffee Pot show the smokebox a much lighter colour than the rest of the boiler, the colour probably being that of bare metal. With the smokebox only 41 inches from the firebox, it is thought that any paint on the smokebox would only last a short time because of the heat.

Steam Motor Coach No. 2 used in the South East of South Australia differed from No. 1 in that No. 2's overall length was 3'-0¾" longer. This difference was accounted for by the fact that No. 2 had a driver's compartment tacked on to the back of the carriage section so that the unit could be driven from both ends. According to a report printed in the local press of the day, the driver was able to operate the regulator, reversing gear and airbrake via linkages from this compartment. The fireman of course, had to remain in the cab of the locomotive section. The driver's compartment on the end of the carriage featured three windows across its width, while a louvre awning similar to those on the side of the carriage was fitted above the three windows. Cowcatchers were fitted to both ends of No. 2.

The Model

And how does one build a model of the Coffee Pot in HO? Well that's another story, and if and when a model has been built, perhaps I'll be able to do another article. The valve gear and powering the unit would be the two main stumbling blocks to building a model. On the topic of valve gear I can be of little help, but perhaps there is an AMRM reader somewhere who could write an article on how to photo etch a set of valve gear and rods for a loco. Powering the unit with an N gauge mechanism through the rear bogie sounds like the probable starting point. The Coffee Pot invariably hauled a four wheel "A" class van along behind it, and if all else fails, perhaps a four wheel van could be powered.

Finally, my thanks to the late George Williams and Hayden Hart both of the Pichi Richi Railway Preservation Society for allowing me to use their notes etc. in compiling this article. While I have not been asked to say so, donations (which I believe are tax deductible if over $2) towards the restoration of this unit would be most welcome. The Society's address is P.O. Box 504, Port Augusta. S.A. 5700.



ON SAFARI IN THE WILDERNESS

Continued from page 21.

VERY FIRST revenue load off the new Alice Springs standard gauge route and had come from the rail head, at Kulgera, near the Northern Territory border. Worked by CL2, it consisted mainly of stock vehicles.

Thinking the good times simply could not last we reluctantly turned for home, again "motorcading" all the way, firstly to Port Pirie, then to Broken Hill.

Here we were amazed to score another five-header train with four Alco 600s and an 830 lashed up.

Then after red-carpet treatment by both management and staff of the Silverton Tramway, complete with specialised photostops and double-heading, we finally left for Goulburn (home).

Our trip had taken us some 6,000 km, gained us more than 3500 photographs, cost us only $280 including meals, some caravan parks, and fuel (but not film) inclusive, and we suffered just one tyre puncture.

Petrol prices were another interesting feature for whilst we were paying about 33.5 cents a litre in Victoria at that stage, we paid only 32.7 at Marree. That was despite a tremendous charge of 40.4 at Tailem Bend a week or so earlier, the most expensive fill on the whole trip.

Alas, the narrow gauge north of Marree is now but history and to be honest I wish my association with the line had begun years earlier.

Rambling Around . . .

For all the railway fans who want to take a journey back into time might I suggest a railway tour of India. India is crossed with thousands of miles of track and a thousand and one things to see and do. Take your camera and plenty of film as steam engines are alive and well. An Indian railway pass, purchased in India, can be obtained for the length of time you wish to stay. If you have never been to an Indian railway station the first sight inside is quite amazing. Hundreds of people everywhere, cooking, washing and sleeping. The train indicators are clearly marked in English and there is always someone to help you. On the big express trains it's best to book a seat in advance. You will find your name on a piece of paper outside the carriage.

As you travel through India you'll find the scenery outside is always changing. Thousand year old temples to farmers working in the fields. And if you get bored, every so often the porters come around and turn on the TV sets to pre-recorded Indian music. Meals can be purchased on the train.

At Delhi I decided to get a good look at a steam engine. So I proceeded across the tracks to an unattended engine standing in a shed. I climbed up on the engine and the first thing I noticed, having worked steam for many years, was the gauge glass cover was missing. Bits of wire and rags sticking here and there helps keep the thing together. Safety is not a big thing in India. The driver came over and we had a bit of a chat about the engine and then I left.

A word of warning: There are no signs or anyone to tell you not to wander around the tracks or engines, and you do so at your own risk.

Delhi has a nice historical train museum but the real fun can be seen around any small railway station.

As for general travel in India, it can be a little chaotic at times, but I'm sure you'll make some fascinating train journeys that you won't forget.

Anon.

Painting Tips

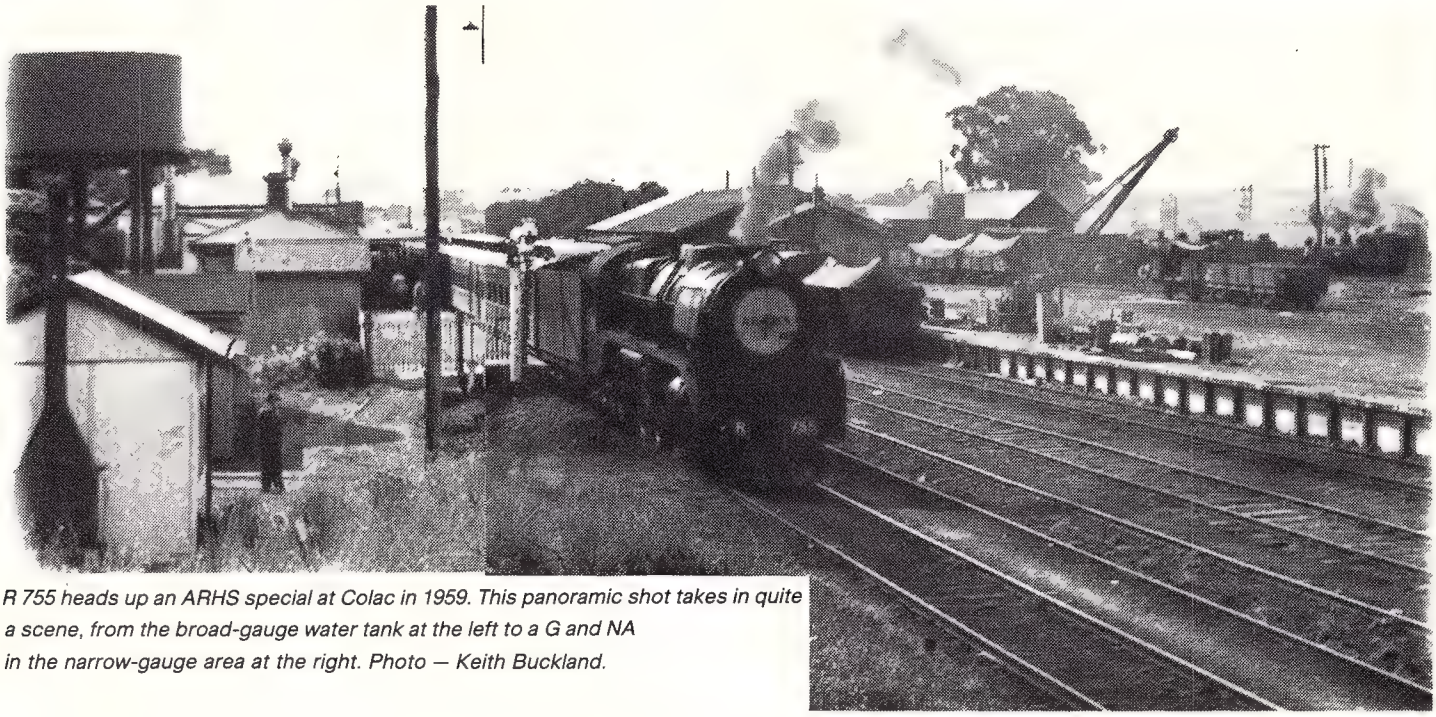
For those of you painting VR locomotives, Floquil have come to the rescue. Try C&O Enchantment Blue (R57) and Rail Box Yellow (R33). The yellow is pretty close to M'n'J transfers.

Phil Jeffery.

NSW VEHICLE COUNTDOWN—18

In 1977, the NSWPTC had 535 'K' type open wagons operational. By 1978, only 116 units of this code remained on the register.

Paul Rogers



R 755 heads up an ARHS special at Colac in 1959. This panoramic shot takes in quite a scene, from the broad-gauge water tank at the left to a G and NA in the narrow-gauge area at the right. Photo — Keith Buckland.

COLAC, VICTORIA — 1925

by Ian Weickhardt

Colac, 152 kms. from Melbourne, on the VR South-Western main line, was an important — and interesting — junction in 1925. That is the year in which the Colac yard map reproduced in this article was drawn. In those days, it was both a busy junction for broad gauge lines, and the narrow gauge/broad gauge transhipment point for the 2ft. 6in. gauge VR line from Crowes.

As such, it is of considerable interest to VR modellers who are particularly interested in having narrow gauge adjunct to 'broad gauge' operations. Briefly, the Colac 'broad gauge' functions were as follows:

- Loco depot for main line trains, Alvie branch line trains, and Irrewarra-Beeac (Colac-Ballarat railway) branch line trains. During the 1930's, it took over responsibility for Birregurra-Forrest branch line trains. (These were originally serviced from Geelong loco depot.)
- A major passenger and freight station on the South-Western Main Line, which links Melbourne, Geelong, Warrnambool and Port Fairy.
- Junction Station for the short branch line to Alvie and the cross-country route to Ballarat via Beeac and Cressy.

Narrow Gauge Operations

Colac's chief function as a narrow gauge transfer point was the transhipment of timber coming via Beech Forest. (Hence the popular name 'The Beechie' for the train.) This traffic accounted for the movement of 750,000 tons of timber between 1900 and 1939, year of the infamous Black Friday when Victoria's best forests were ravaged by bushfires.

Also coming down the narrow gauge were bagged potatoes, oats, and small quantities of dairy products. Unfortunately, for revenue, there was very little freight going up the line from Colac. Passenger service was provided by attachment of passenger cars to goods trains, making up what were popularly known as 'mixed trains'. This narrow gauge line was most spectacular in terms of the curves and grades that accompany railway operation through the thickly timbered Otway Ranges of Western Victoria. The modeller of a 'Colac-style' scenario can have representatives of all types of VR narrow gauge vehicles on his layout, marshalled in short trains because of the tigerish grades. As shown in the picture of Colac station and yard, both NA's and the G's (Garratts) worked the narrow gauge.

Broad Gauge Operation

The 'main line' through Colac consisted of a single track from Melbourne to Port Fairy, via Geelong. Colac is a crossing station, and therefore has the staff machines that facilitate the safeworking of trains on many VR single line sections. The morning and evening passenger trains between Melbourne and Port Fairy have been a tradition for a long time. In 1925, the VR was still operating Travelling Post Office cars, and one was allocated to the Melbourne-Warrnambool run. These cars were BDSE's. When taken out of traffic in the 1930's, they were converted to BE and BCE cars (12-wheel timber bodied corridor cars). In living memory, the passenger trains have been hauled by the A2 4-6-0's, R 4-6-4's, and the B and T Clyde-GM de's. On race days at Warrnambool, there are through workings of streamlined stock hauled by a B or an S for the race patrons. In 1925, Colac was the junction point for a short post-World War I branch to Alvie, and the cross country line to Ballarat, via Cressy.

So Colac yard was pretty busy handling the freight traffic to and from the branches and in both directions on the main line. As Colac is an important provincial town in the pastorally well-endowed Western District, much of the freight consisted of dairy products, sheep and cattle, and timber. There was a considerable traffic in bagged potatoes, and also the timber coming in via the narrow gauge line. T and U vans were therefore around in large numbers, as were the 'I' series of gondolas. L's, LB's (for sheep) and M's (for cattle) carried the livestock. The cross-country line to Ballarat is known to have been very busy with livestock traffic. When the Colac end was closed in 1956, the local newspaper caned the VR. Local folk said that the rails had worn out through sheer heavy freight traffic, and that to close the line instead of repair it was a backward step. However, by 1956 the road hauliers were siphoning off large amounts of the profitable livestock traffic, and the line was not carrying enough traffic to justify keeping it open.

Locomotives and Facilities

In 1925, the narrow gauge was serviced by the NA 2-6-2's. The Beyer-Garratt (G41) did not arrive until 1926. Apart from the lack of a turntable, the loco facility consisted of the normal groupings of sheds, pit, coal road and sidings.

The broad gauge loco facility, a sub-depot of Geelong was based around a 70ft. turntable. In 1925, D2's, D3's A2's, and K's would have been serviced there. Later there were the N's (2-8-2's) and after World War II the R's and J's.

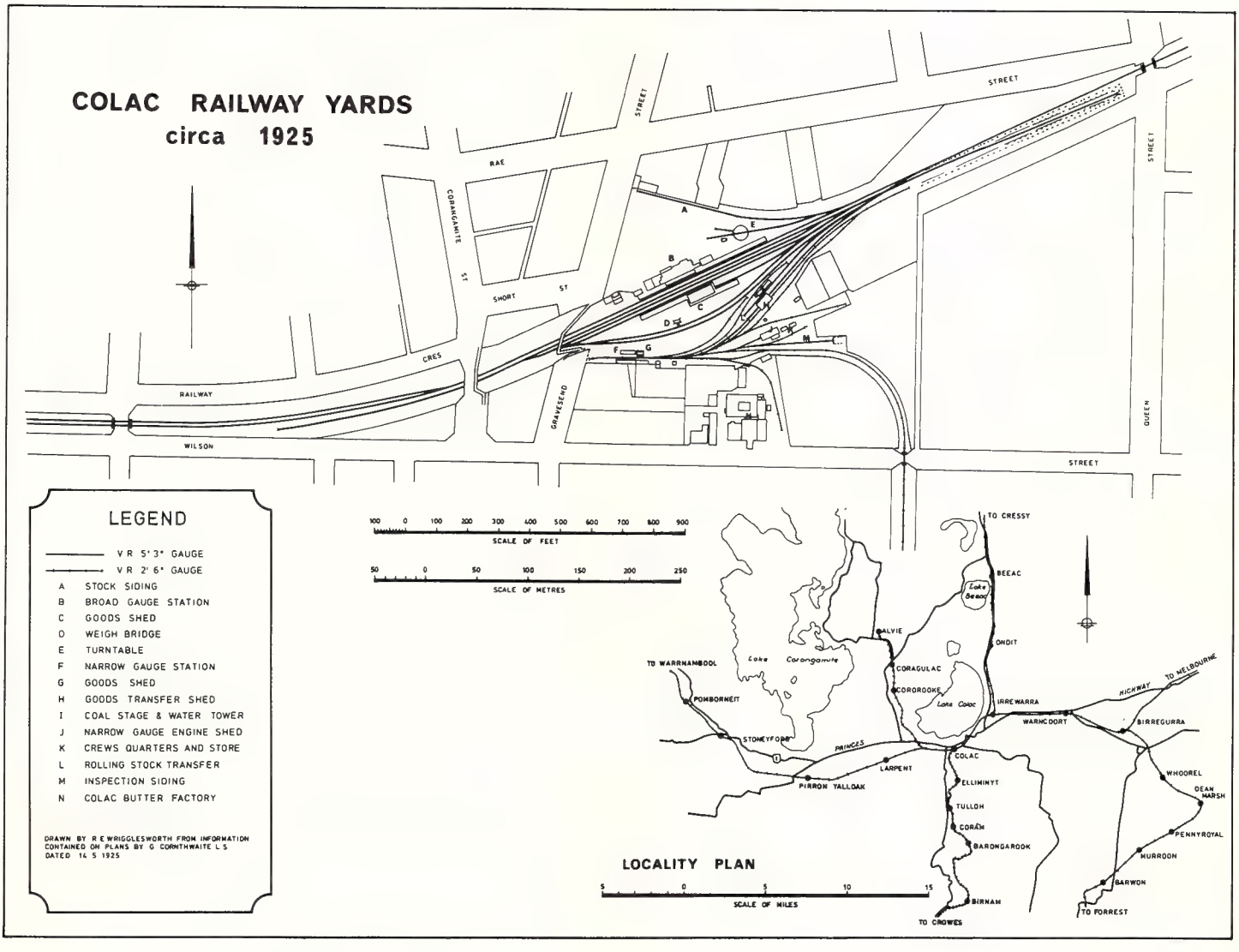
A model or adapted model of Colac would provide a challenging and satisfying project for someone who wanted an interesting junction station as the focal point of their layout. In one location, Colac provides for main line, branch line, cross country, and narrow gauge operation. And in 1925, before the roads were much good, Colac was the busy focus of all that — and no diesels!

Useful References

"Speed Limit 20" by E. A. Downs. Published by ARHS. (Out of print, but available from several public libraries).

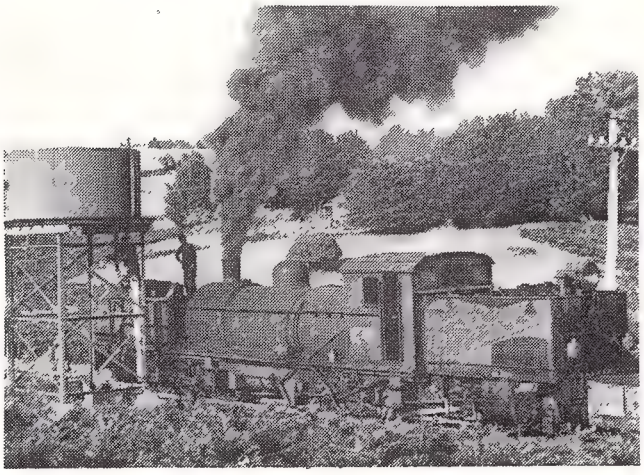
"Sawdust and Steam" by N. Houghton. Published by the Light Railway Research Society of Australia, and available in bookshops serving 'railfan' interests.

G42 ready to leave Colac with goods for Ferguson in 1955. Ron Preston photo.



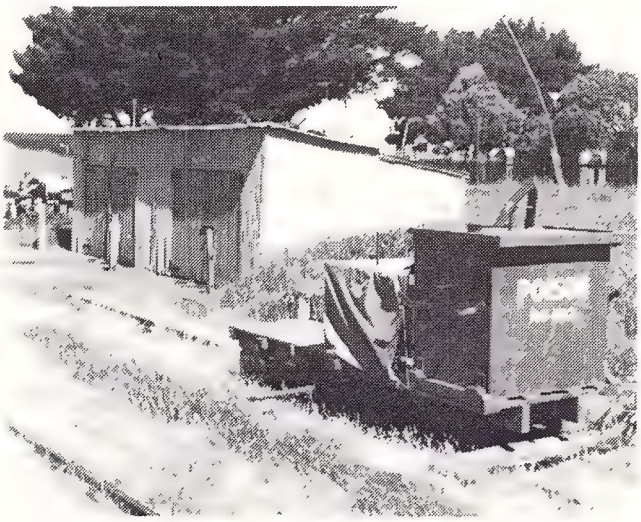
A2 996 on Down paper train, Colac 1955. Ron Preston photo.

5A and 14A in store at Colac in 1957. Ron Preston photo.



Gone but not forgotten. G42, one of the Garratts, takes on water at Dinmont on the Colac-Crowes line. She was a common sight at Colac narrow gauge loco depot in the mid-1950's. Photo — Keith Buckland.

Double headed R class at head of Warrnambool goods, during 1957. The footbridge at end of Colac yard is being rebuilt. Photo by Ron Preston.

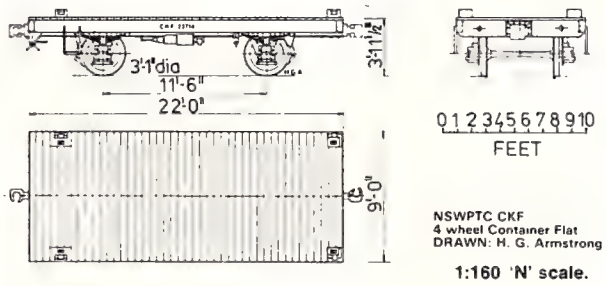


Weedkiller train outside track gang hut at Beech Forest in 1957. Ron Preston photo.

Beech Forest station — circa 1955. Ron Preston photo.

COLAC, VICTORIA — 1925

G42 passing McDevitt with timber from Beech Forest in 1957, viewed from van. Ron Preston photo.



The NSW KF wagon is identical to the CKF plan printed above except that the KF has a completely timber deck free of any container retaining lugs.

A KF IN N SCALE

by Stuart Livesey

When I started in N Gauge recently I swore that I would stick to American prototype. It wasn't long, though, before the Australian bug bit again, and I began to tinker and tamper with my rolling stock in an attempt to convert it to various Australian prototypes. I have also had a go at scratchbuilding and found it fairly easy, just as easy as in HO. In this article I will describe one of my efforts at tampering. It is not an article for the purist for I have compromised on measurements, brake detail and a few other things as well, but the result looks O.K. and I'm quite satisfied with it.

For my first effort I decided to build three KF wagons and I would refer you to page 16 of the September/October 1977 issue of *AMRM*. The basis for my conversion was a 4 wheel ventilated van produced by Peco but any 4 wheel van or wagon with the same wheel base will do. The dimensions of the model I used and the dimensions of the prototype are set out below. The height of the Peco van is not important.

	Peco Van	PTC KF
Width	8'6"	9'
Length	19'	22'
Wheel Base	11'	11' 6"

as you can see, the dimensions are quite close.

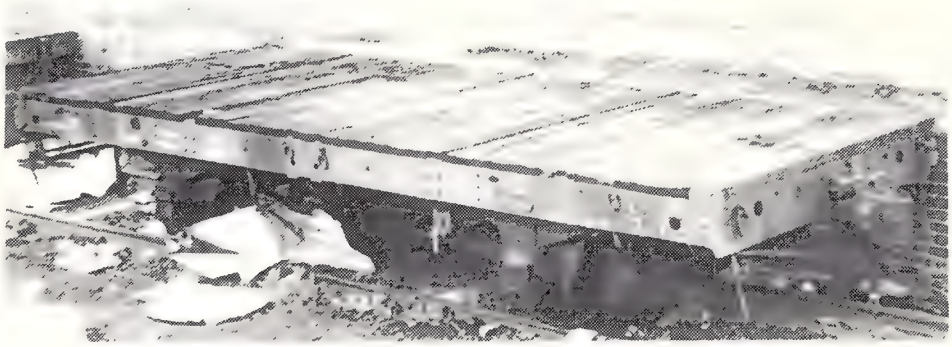
The vans I converted were from an early production run and small nuts were used to hold the body to the floor. Later runs use a different method but it is still fairly easy to separate the two pieces.

The first step in the conversion is to remove the wheels and store them in a safe place. To remove the wheels carefully spread the axle boxes. Then separate the body from the floor, taking care not to damage the lugs on the ends. These lugs form part of the couplers and will be used later on. Don't throw the body away, you never know what use you can put it to. (I used one end to give me the correct roof profile for a VR TP van I am scratchbuilding.) Unfortunately the weight in the wagon cannot be used in the conversion; the best way to weight the KF is to incorporate a weight in the load.

The next step is to remove the buffers and brake rigging. I left parts of the rigging intact and I think this adds to the wagon's appearance even though the rigging is incorrect. At this stage I also cut the lugs from the van body. The lugs are necessary for without them the coupler is free to move about in its pocket. The lug should be carefully glued back in the pocket before it is lost.

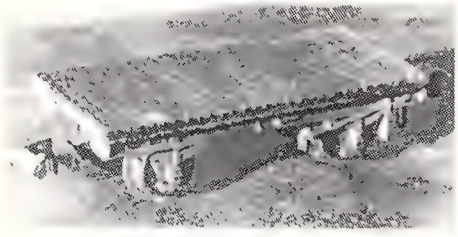
The floor was formed from very thin ply and the planks were scribed before the floor was cut out. I didn't measure the plank spacings — have you ever tried to measure 3" spacings in N? If care is taken to keep the spacings approximately equal the result should look O.K. If you are converting more than one wagon at a time it is a good idea to lay the floors out side by side so that the planks can be scored more evenly and quickly. My floor's measurements were 9' x 19' 6".

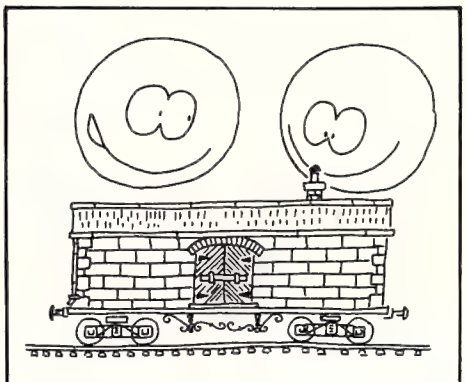
Once the floor and chassis was glued and dried I spray painted the wagon and put them into revenue service. I have made no attempt to letter the wagon for, in N, the space available for lettering is just too small.



A bufferless KF wagon in the loading dock at Liverpool. R. Gallagher photo.

KF wagons in action, carrying farm machinery on a Down train at Wyong in 1979. R. Gallagher photo.





"I see Volmer is producing rolling stock kits now."

Z189 photographed in new condition. You can see the lining on the cab and tender, builder plate on the cab side, a small headlight, lack of coal bunker extensions on the tender and the air compressor has not been fitted. Photo courtesy of The South Australian Archives.

This photo from Doug Colquhoun's collection shows that by 1923 some coal railings had been added to the tender but the small headlight remained.

Around 1920 somebody spent a lot of time carefully placing lump coal on the tender of Z194 to increase the capacity.

PROTOTYPE PLAN

Z Class 4-4-0 of the SAR Narrow Gauge

Article: Phil Curnow
Plan: Roger Johnson

Early in 1895 eight locomotives with numbers Z187—Z194 were placed in service and allotted to the Northern Division where they worked passenger trains on the Terowie-Peterborough-Cockburn run. When hauling the down Broken Hill passenger from Peterborough they were allowed a train load of 165 tons whilst on the return the load reduced to 135 tons due to the grades between Paratoo and Peterborough. They also worked on the Quorn line. Maximum permitted track speed was 35 mph.

They were built by James Martin and Co. of Gawler to the design of Mr. T. Roberts who was the Chief Mechanical Engineer of the SAR. They had 4'6" drivers and developed 10,270lbs tractive effort at 85% of their 145lbs/square inch boiler pressure. This was the SAR's 4-4-0 construction era as Martin's had just completed seven broad gauge Q class (5'1", 11,840lbs, 130lbs psi) and had started the broad gauge S class (6'6", 12,710lbs, 150lbs psi). Islington Workshops built Z195 and Z196 and these engines entered service in 1911 bringing the class total to ten locomotives. The Z class were small engines being 41'10" over their chopper couplers with a working weight of 50 tons 1cwt. and the maximum axle load of 9 ton 17 cwt. being on the leading driver. The original tender carried 4 tons 10 cwt. of coal and 1,600 gallons of water; however there were several styles of tenders used. They all had the distinctive SAR styling features of cutaway cab sides and a tall copper capped funnel with class letter in brass on the rear and engine number on the front of the funnel.

When the Western Division narrow gauge system based on Hamley Bridge was being

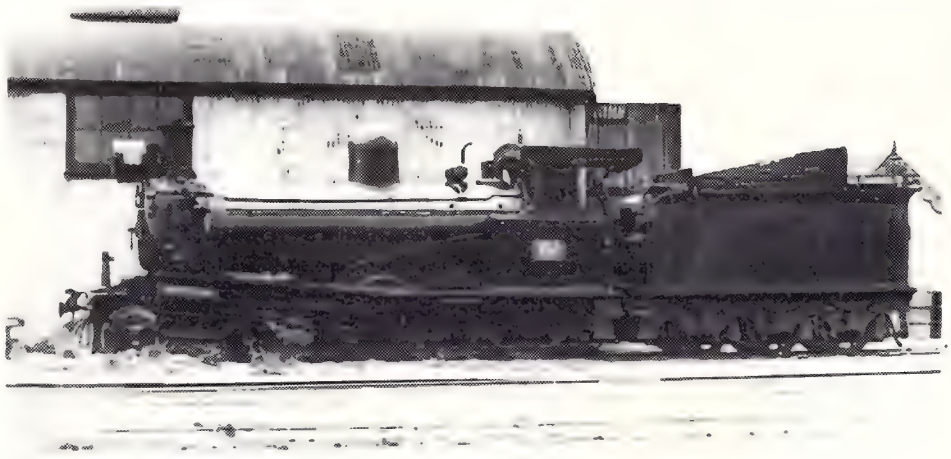
converted to broad gauge in the 1920s the engines from that Division were spread through the other narrow gauge depots. Possibly as a result the Z group was split as in 1924 Z193 and Z195 were transferred to the South Eastern Division based at Mount Gambier with Z196 following in 1925 and Z189 and Z191 in 1926. Their heavy axle load restricted them to the main Mount Gambier-Wolseley line as they were too heavy for the Beachport, Wandillo, Glencoe and Kingston branches.

The South Eastern Division was converted to broad gauge in the 1950s. Z191, Z192 and Z195 were transferred to Port Lincoln in 1950 where they worked as yard shunters, with only one known run on the main line.

On 23/1/1956 the other seven were condemned presumably at Peterborough. In October 1956 Z191, Z192 and Z195 were tendered for sale at Port Lincoln at which time there were only eight S class and nil Q class remaining on the broad gauge main lines. The 4-4-0 era ended on the SAR in 1960 and none have been preserved.

Z195 receives attention at Naracoorte in 1935 whilst heading a typical passenger consist. This photo by John Buckland also shows some of the detail hidden behind the cab side extensions.

Above and below: These two photos by Ralph Skewes are of Z193 and Z195 showing the differences between the two batches. Note the older engine has its builder plate on the cab and the number on the wheel splasher while the newer engine, being built at Islington has the standard combined builder and number plate on the cab. Photos from the Mile End Museum collection.

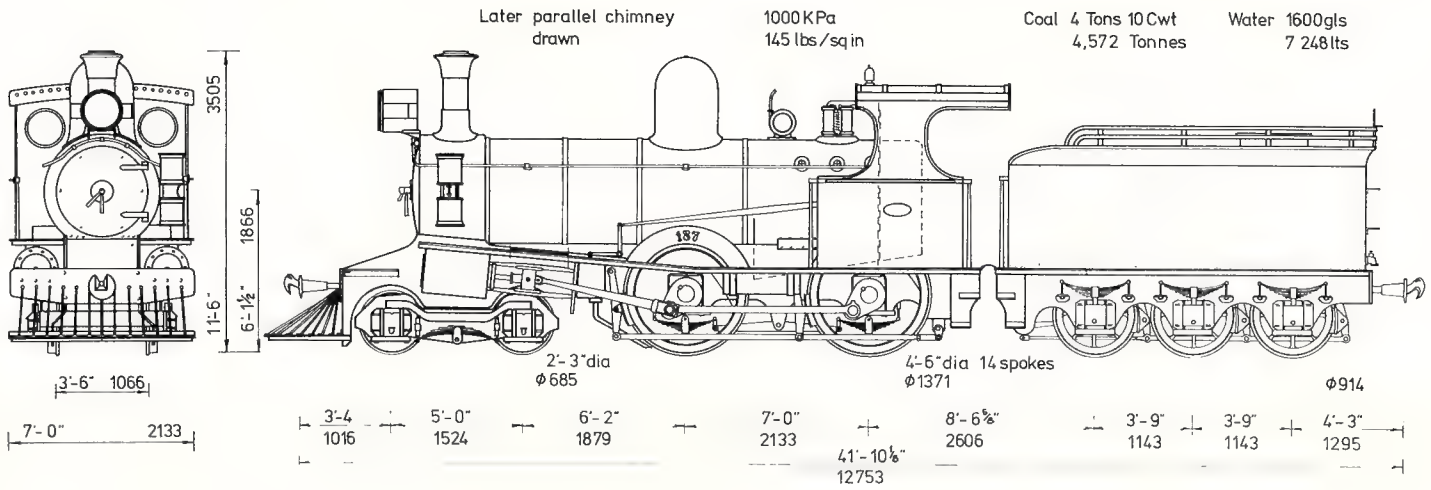


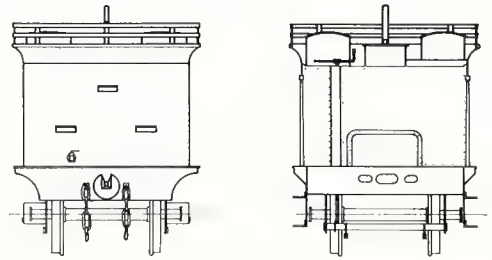
The Plan

Initial research for this project began quite a few years ago, with the actual drawing being commenced by Laurie Williams. Compilation of additional photographs and data resulted in the artwork being completed by Roger Johnson to the now improved standard required by this magazine.

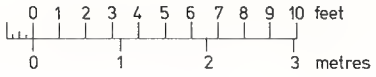
As found with other locomotive plans the draughtsman is severely restricted when drawing an engine of a class that has disappeared. In the case of the Z class frequent changes were made to the locomotive but not to the plan. It appears that the SAR's distinctive copper clad funnel with class letter in brass mounted on the rear of the funnel while the number faced the front remained throughout the life of the engines, as did the cutaway cab and porthole windows in the cab front plate. The SAR would add an 'x' to the letter code when the engine was rebuilt, which usually involved a larger boiler. This class remained

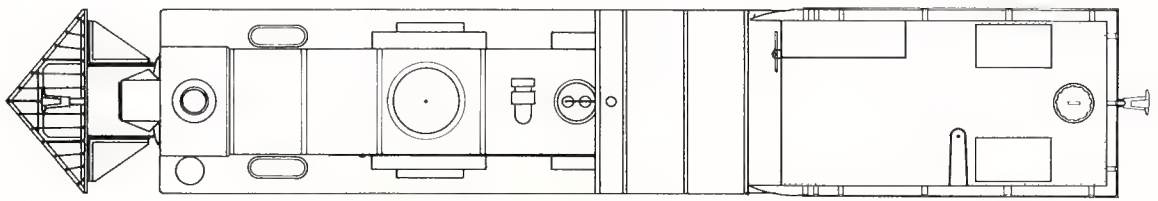
The Narrow Gauge Z Class 4-4-0





Road No's :- 187 - 196
In Service :- 1895-1956





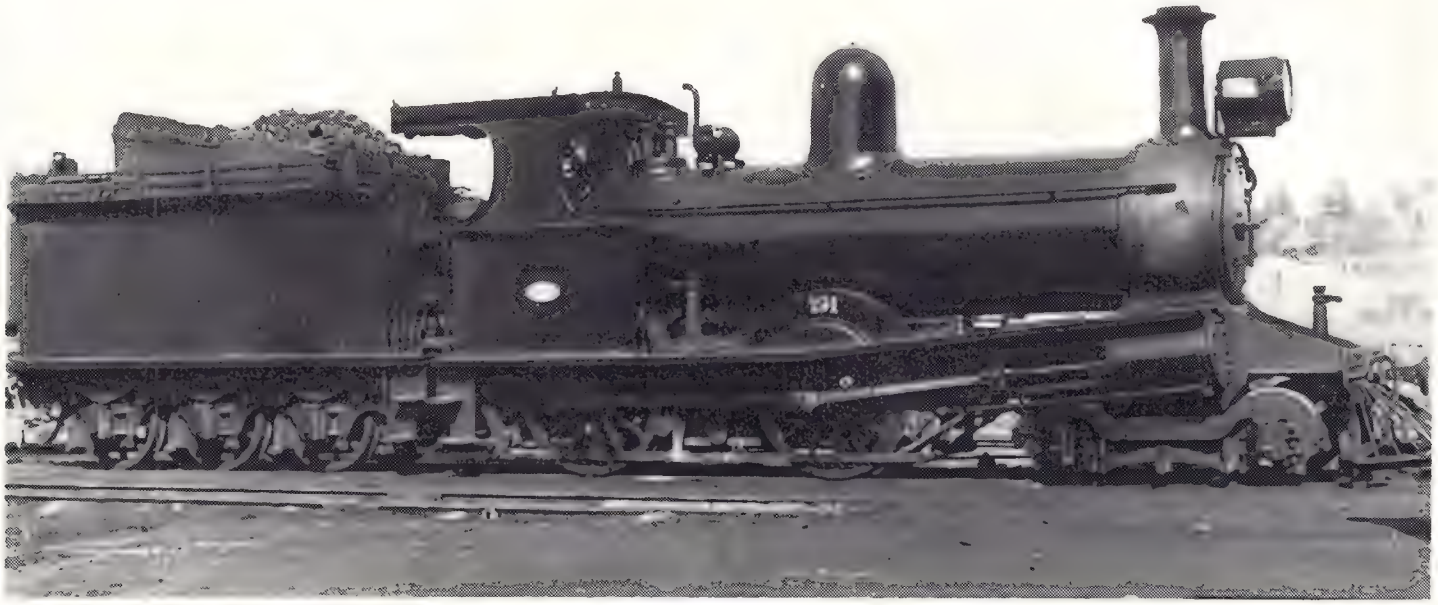
TRACED & DETAILED R. JOHNSON 23 JUL 78

NOTE.- Electric headlight, Westinghouse pump, turbo-generator, air receiver and tender are additions to original design.

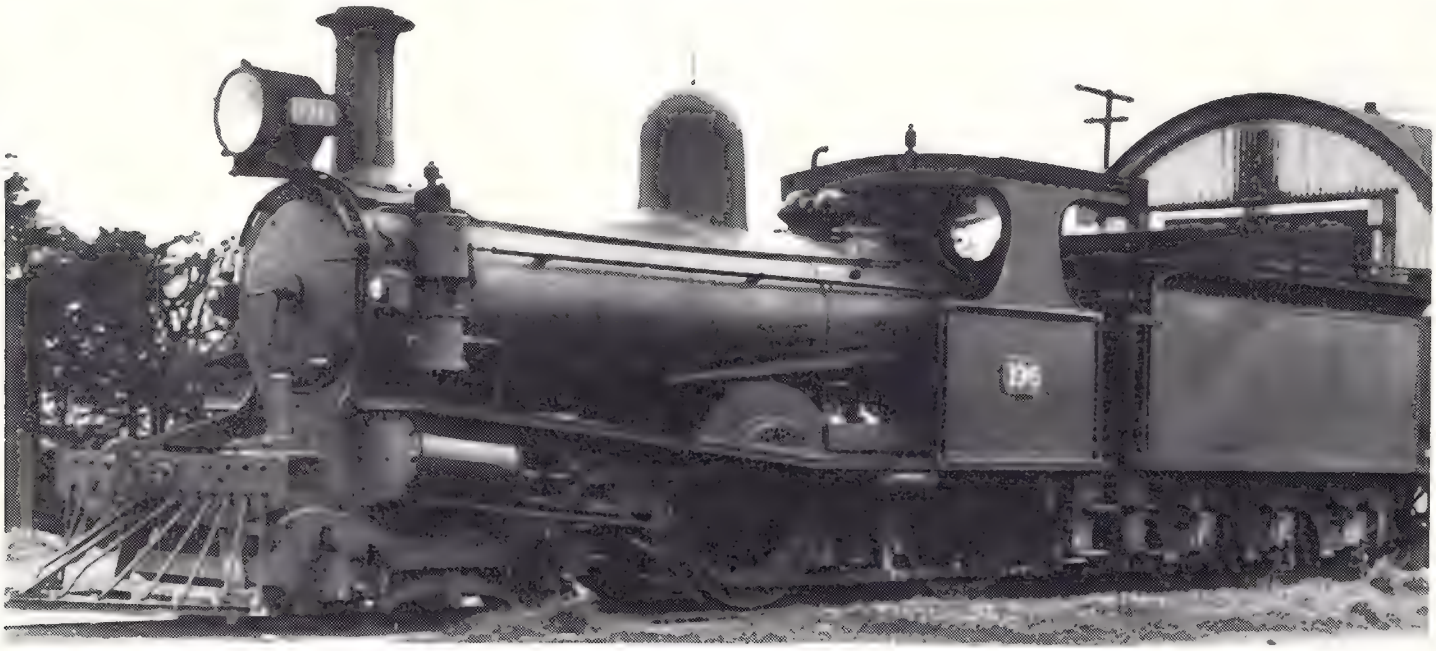
Tender was further modified by addition of "Hungry boards" and rear side steps.

Original tender did not have coal rails and rear sheet steps were spaced 5" closer.

All details estimated from four known photographs and Engine Diagram



Z191 at Mount Gambier in 1935. Photo by John Buckland.



Z196 and water tank at Naracoorte in 1935. Photo by John Buckland.

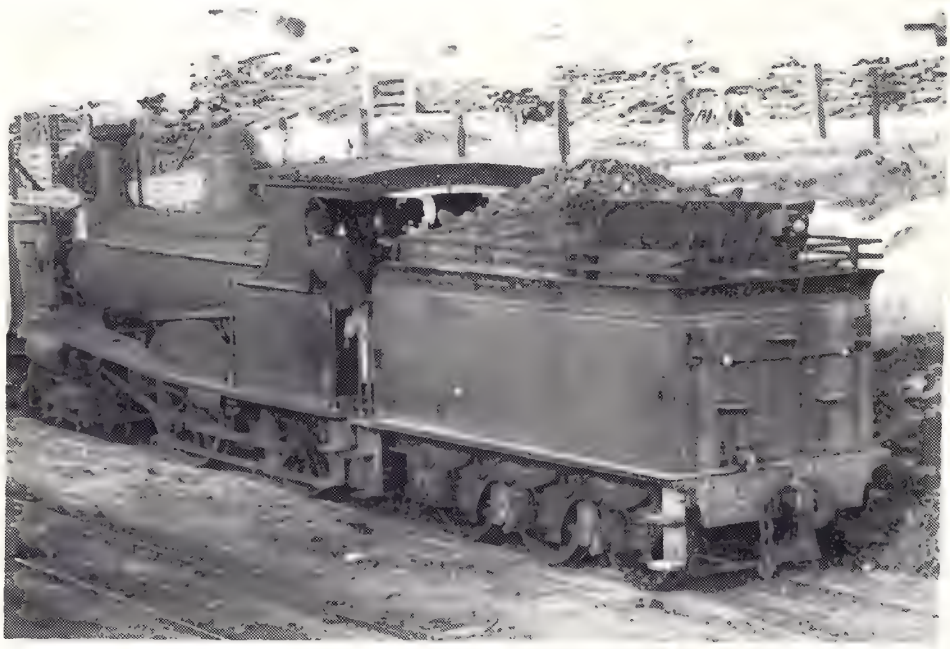
plain Z throughout their life so presumably the boiler retained its original dimensions. We were able to locate a plan of the engine as originally built and of two types of tender.

Roger has used the construction plan and added compressor, auxilliary reservoir beneath the running plate on the left side, generator and electric lights to produce a plan of how they looked towards the end of their life. The compressor and generator were produced from known standard dimensions, but the lights and reservoir have had to be 'guestimated' from the photos. The raised sides on the coal bunker (hungry boards as Roger calls them) were not drawn as they appear to be different for each engine tender rather than being to standard dimensions. For those modellers contemplating building a Z as it would appear in a particular year we have been unable to determine precise dates when the modifications were made.

References:

'Locomotives of the SAR' by Wilson and Marshall; Port Lincoln Tour booklet written by Kim Bird; S.A. Railways Institute Magazine of July/August, 1970 which supplied most of the historical notes.

Acknowledgements also to Bob Burton, Allan Watson, John L. Buckland and the Late Gifford Eardley for their assistance with details and photographs.



This view of Z191 shunting at Port Lincon in 1953 is enlarged from a photo by Doug Colquhoun.

INFORMATION FOR NEW MODELLERS

by Phil Flynn

The problem is where does one start, in answer to the problem posed by A. Harvey in his letter to the editor in the November/December AMRM. A few years ago I found the same problem of getting to know terms, techniques and of knowing where to purchase items.

Gradually by reading AMRM you can pick up the terminology. By reading this and any other *railway publications,* and observing railway operations first hand at a local station, yard or siding, knowledge can be picked up.

As for other publications, the following have been found very useful. Australian Model Railway Magazine — AMRM — bi-monthly publication. Purchasing back issues can allow you to catch up with many terms and techniques, though this can be disappointing if you miss an important part of a series and cannot get it.

Kalmbach books — All of these books are very useful in some aspects. These are available from most hobby shops advertising in AMRM. A valuable book to get you started is *The ABC's of Model Railroading.*

Locomotives of Australia by Leon Oberg provides an excellent coverage of locomotive power in Australia and is available at most bookshops and often at newsagents.

Australian Railway Historical Society — Publications are provided to members (Address for NSW Branch: PO Box E129, St. James, NSW. 2000). They also have a book sales centre located in NSW at 27 Belmore St., Surrey Hills, Sydney and on writing will forward an extensive list of publications of local and overseas books on the prototype railways.

State Rail Authorities (eg. in NSW, Archives Section, SRA, Transport House, York St., Sydney) have extremely useful publications for a small price. If you ask nicely enough a list of publications available could be forwarded to you. They have sheets on rolling stock codes, numbering and lettering, and plans of various railway equipment.

Model railway associations (eg. Southern Cross Model Railway Association has a joining kit of railway information, prototype practice, modelling hints and techniques. They also bring out a letter with each edition of AMRM — see advertisement in AMRM.) These are general references that have been found useful, but there are many more.

MATERIALS

As for materials, I do not wish to sound trivial, but this list may help.

Timber for a layout from most joineries — usually 2" × 1" maranti or pine on end used for a frame with a choice of pineboard, masonite, or soft chipboard for the surface.

Locomotives and Rolling stock (commercially made) from most hobby stores, which stock many brands — see advertisements in AMRM and let the hobby store know you saw their advertisement in AMRM, as they will continue to advertise in AMRM. There are also excellent loco kits and brass locos, but not all provide paint, bogies, wheels or transfers.

Track

These are of various codes with the most popular being Code 100, but many modellers use a more prototypical looking Code 85. Most popular track is made of nickel silver to prevent rusting, but some commercially made track is made of steel. Ready-made track can be bought in 900 mm lengths or set pieces of track that can be clipped together. Turnouts or points and crossovers can be purchased as well, but take up more space as you move from stub points to No.4 to No.6 points. You may prefer to lay your own track, for which there are sleepers, rail and ties available.

Ballast for Tracks

This is of various types and should be purchased depending on the area to be modelled. This can be made up yourself by crushing some rock to small pieces.

Parts for Scratch-building

Brass — from most hobby shops advertising in AMRM.

Styrene — various thicknesses available as above.

Stripwood — 6" and 4" scribed or shiplap weatherboard style from G. Duncan (see advert. in AMRM) or leading hobby shops.

Corrugated Iron for rooves — from G. Duncan (as above), and other hobby shops. Bogies — plastic, white metal or brass with plastic, steel or brass wheels. The appropriate bogie types for NSW wagons, for example, are found in a little booklet produced by Protype.

Building Papers — These are of various types and makes, but your needs depend on the area you are modelling.

Balsa Wood — various sizes from the "very" nearest hobby shop can be used to build a variety of structures.

Basswood — bolsters, rooves, sides, floors are all available in this material.

Nuts, Bolts and Screws for modelling are usually found in the larger hobby shops. A very useful size is a 14BA ¾" nut and bolt for attaching bogies and couplers when building or scratch-building rollingstock.

Couplers — of your choice can be used on your layout though many modellers prefer the prototypical looking Kadee knuckle couplers. These can be screw mounted or placed on with a small dob of 5 minute Araldite. A Kadee height gauge can be used to adjust and test the height of the coupler. Kadee uncouplers (of various types) can be used, which are above or below the track.

Paint — Model paints should be used as they are ground for painting intricate areas. Matt finish for the first coat and depending on the piece of rolling stock, matt or gloss should be used for the finishing coat. I feel most rolling stock should be a matt finish as this is how they appear in their working life, but a gloss finish can be sprayed with a dull coat available in a can. Coats of paint can be brushed or sprayed on. Paint may be a ready-bought colour or you can mix it yourself (but record the mixture for future reference). Humbrol, Testors and Floquil paints have been found useful. Stripes for passenger vehicles can be purchased in various widths and colours.

Transfers — can be purchased in sheets to go on various rollingstock. In NSW many sheets are produced. Some shopping through the pages of AMRM or writing to a hobby shop can find you the transfers you need.

Tools

These could include the following: a Stanley knife, Exacto knife, model railroad scale ruler (obtained from Paul Co. hardware stores in most capital cities), jeweller's screwdrivers, small sidecutters, scribe, files — some small, some large, and paint brushes.

This list is by no means extensive, but will probably get you started.

Building bench work will require carpentry tools and your tool list can be added to as your interest in the hobby grows.

As for glues the following are useful: 5 minute epoxy, contact cement super glue and MEK plastic weld solvent.

Figures

People, workmen and so on for your layout are adequately covered by a number of commercial producers such as Merten, Lifelike and Campbells.

Structures

These may be bought in kit form or scratchbuilt. Structures can be observed in the field or plans purchased from your state rail authority or found in the pages of AMRM. It is very rewarding to build your own structures, but time consuming. Materials for building your own structures have been partly listed above.

Trees

Typically Australian looking trees are those built with strands of wire bent to represent limbs and dyed flock or lichen used to represent foliage. However, trees may also be purchased.

Landscapes

These may be created by placing plaster of paris impregnated paper towelling over screen, paper, foam or chipboard. It can then be painted with acrylic paint and covered with flock, lichen, sawdust and other materials.

Electrical Items

Transformers, wiring, toggles, switches, control panels are covered fairly well in most introductory model railway books, but a very worthwhile book on the electrical side of modelling is the Kalmbach book *How to Wire Your Model Railroad* by Linn H. Westcott.

Other Items

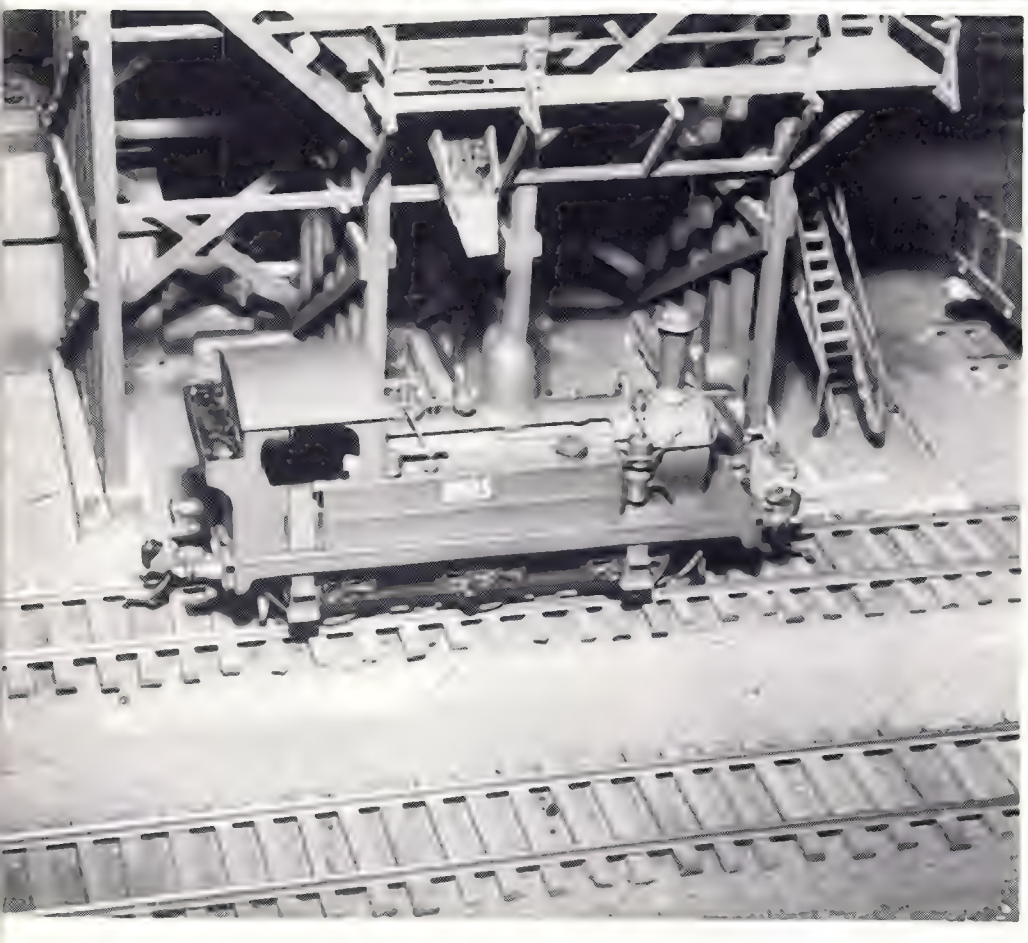
You can sometimes use a large number of materials found around home for modelling purposes — cardboard, wire, lino, plastic pill bottles, cotton, sawdust, acrylic paint, tea leaves (I have seen these used for tree foliage and grass), tissue paper (for tarpaulin), matchsticks, cellophane, styrene, foam, and plywood. Just let your imagination run wild!

If you wish to know whether a hobby shop stocks an item, write to them, as they are usually very helpful. Living in the country, quite some distance from the nearest major railway hobby shop, I have had to write enquiring about items or making orders. For the most part I have nothing but praise for the hobby shops, with whom I have dealt. Some hobby shops provide price lists of items they carry. Should you find poor service from a store, then do not deal with them and they will soon get the message. Shops which I have found to have a wide range of equipment and have been very helpful include Berg's Hobbies, McBees Hobbies, Model Dockyard, Casula Hobbies, Hobbyco, F.S.M., while a local dealer, Traintasia has also been helpful. These are only those I have dealt with regularly and in no way denegrates those not mentioned. If you cannot find all the items you require at one shop, write to another or shop around.

This is not an exhaustive list of items newcomers to the hobby have trouble with, but covers quite a few, as I had them myself when starting. This article does not provide the best possible answers and may still assume quite a bit in parts, but I hope it provides some assistance to newcomers.

Best of luck with your modelling.

SCENIC ROUTE



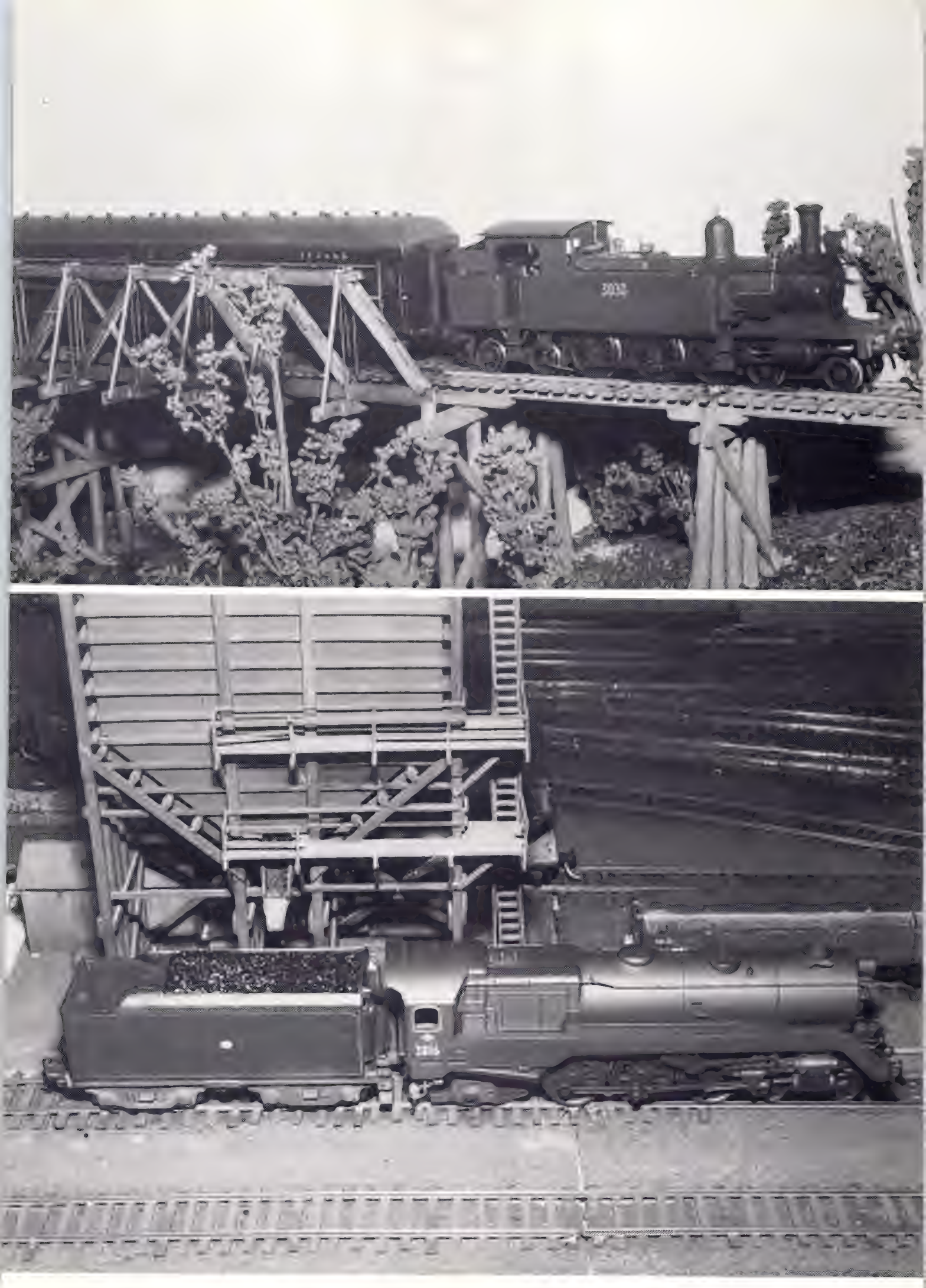
Alan Templeman, a regular AMRM contributor has supplied the photographs for SCENIC ROUTE this issue.

Above. *3390 heads a passenger train over a beautiful model of a stone viaduct, based on the viaducts of the Great Zig-Zag near Lithgow (NSW), built in HO scale by Howard Armstrong.*

Left. *1805, a scratchbuilt model in HO scale, by John Glastonbury, poses for photographs alongside the coal stage on Howard Armstrong's layout.*

Above Right. *Another photograph using Howard Armstrong's layout as a backdrop. 3030, a brass model reworked by John Glastonbury, hauls a passenger train over a timber truss bridge. The bridge was scratch-built by Howard, being based on a bridge over the Namoi River between Narrabri and Walgett.*

Right. *3816, a HO Lima model, extensively reworked by John Glastonbury.*



MODELLING PROJECT

V.R. 'C' Van

John McKenzie describes the construction of a Victorian Railways 'C' van from two Hornby 'Z' vans

Materials Required

1. 2 HORNBY 'Z' vans.
2. 1 pair of bogies; Roundhouse 4 wheel Pullman, catalogue no. 2937 were used.
3. Plastruct shapes as follows;
   (a). 2 lengths 3/32" catalogue no. 103.
   (b). 1 length 1/16" catalogue no. 102.
   (c). 1 length 1/16" channel catalogue no. C-2.
4. K. and S brass wire, 1 length 0.020 diameter.
5. 1 pair of Kadee no. 5 couplings.

Tools Required

1. Zona saw with fine blade (or similar razor saw).
2. M.E.K. type adhesive, e.g., Plastruct plastic weld cement.
3. 1 tube of super glue.
4. No. 76 drill and suitable pin chuck.
5. Marking gauge.
6. 10" hand second cut file.
7. 6" hand smooth file
8. Rule, scriber, centre punch, dividers, engineer's square and small pliers.
9. 1 sheet of coarse emery cloth and 1 sheet of 280 grade wet and dry paper.

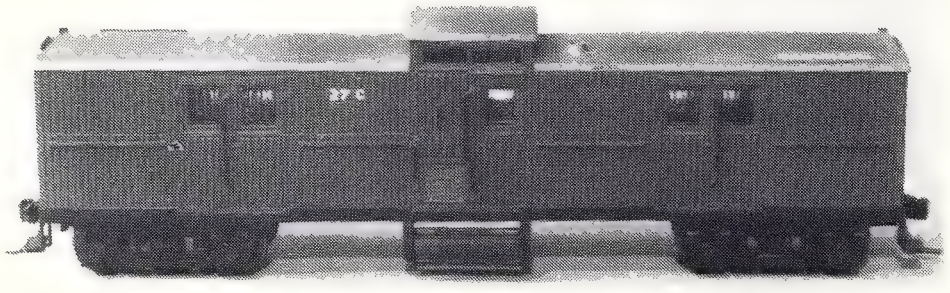
Construction Procedure

The project was begun by removing the Hornby 4 wheel underframes and discarding same. They are removed by pushing the mounting lugs on the underside of the body inwards and springing the underframe away from same. The lugs are then cut off the body using the Zona saw. The roof is then removed by pushing gently with a blunt tool, e.g., the end of a paint brush, on the windows and then lifting the assembly out of the body.

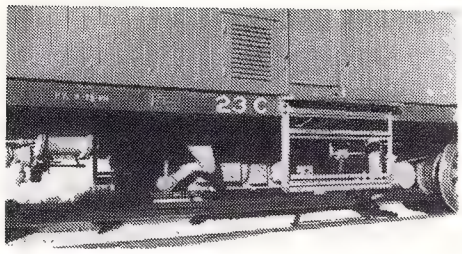
The second stage was to cut 2 mm. out of the centre section of the bodies so as to lower them closer to scale height. The section removed is directly below the windows and is shown as a cross-hatched area in the drawing. The section is carefully marked out using a small metal marking gauge or a similar tool that will enable a line to be scribed parallel to the bottom of the bodies. After this is done cut through the body carefully, ensuring that the saw cut is made between the two lines. When doing this, it is advisable to hold the body at an angle of 45 degrees in a vice, with soft jaws being used to prevent jaw marks being left on the body of the van. The first saw cut is made in the top corner and continued until it reaches half way across the end and the same distance down the side. This procedure is repeated on the other three corners until all saw cuts meet.

The second cut file is used to file the remaining waste to the scribed lines. The ends are done first, and it is necessary to support the section being filed with your fingers so as to prevent flexing of the thin plastic sections. When each half has been filed to the line, the final levelling is done by rubbing each section on a piece of fine emery cloth laid on a flat surface. Check how the two halves fit together by assembling and holding together with rubber bands. Any gaps will then show up clearly and if there is evidence of this, the high spots are removed carefully with the smooth file. Final levelling is done with the 280 grade paper on the flat surface. When this is done, the join is then made by using the plastic solvent cement. Don't use too much solvent; a thin coat on each section of the joint is sufficient. The two halves are joined together and additional solvent can be run into the joint from the inside of the body. An excess of solvent on the body will damage the detail on the van. When both bodies have been completed to this stage, set aside to dry overnight.

The third stage of the project is to cut off the raised end section of *one van only.* The section to be removed is shown cross-hatched in the drawing. This cut is done using the Zona saw and levelling up is done with the files and abrasive paper. The scribed timbers on the side of the van can be used as a guide when sawing and levelling this section. The two bodies are now joined together using the solvent sparingly. It is necessary to remove the detail of the end that has the second body glued to it,

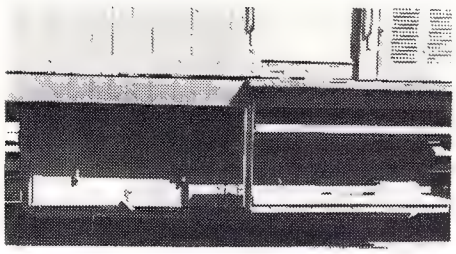


The model 'C' van.



so as to enable a good fit to be made. Rubber bands can be used to hold the sections together while drying; make sure no solvent comes into contact with the bands, as it will be transferred to the outside detail and damage the plastic.

The underframe and bogies comprise the fourth section of the project. Two pieces of 3/32" Plastruct angle are cut to the overall length of the body and glued in place with the angle facing inwards. The bogie centres are then found; they should be a scale 6'0" (21 mm.) from the end of the body. The bogies are attached with suitable screws and packed up, if necessary, with washers to ensure that the floor is the correct height above rail level. The underframe is continued across the ends by cutting two more pieces of 3/32" angle and fitting them between the side pieces. This can



be done by cutting mitre joints at 45 degrees with the saw and fitting with the smooth file. The couplers can be fitted and adjusted for height, and the detail is finished off by making the steps. The centre ones are made up as shown in the drawing; the ones outside the double doors are made from 3/32" Plastruct 19 mm. long glued to the underframe section as shown in the photographs.

The roof sections require little modification. The work listed below has to be done;

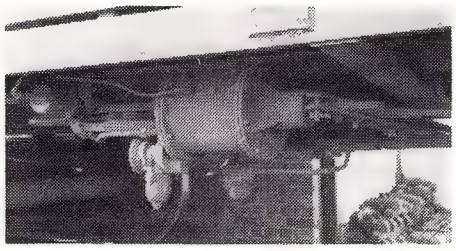
(a). The roof on the shortened van has to be cut back so that it is level with the open end left after the raised section was cut off.

(b). The openings for the heating stoves have to be filed level as it appears from photos that some other form of heating is used in these vans.

The end detail for each end consists of the following;

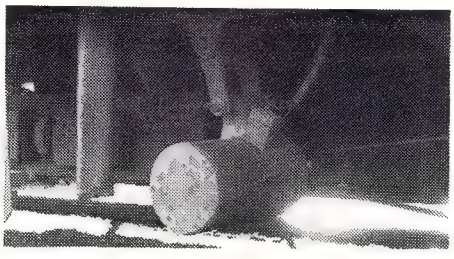
(a). Two vertical braces made of 1/16" Plastruct channel, cut 25 mm. long, chamfered on the ends and mounted on a vertical line 8 mm. in from the corner of the van.

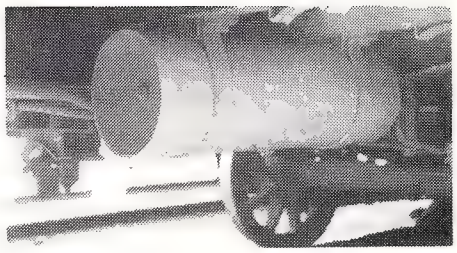
(b). Two steps made from 0.020 brass wire bent at right angles at either end, but with the ends pointing opposite ways, like a straightened "Z", so that one end can be glued into No. 76 diameter



holes drilled into the body and the other can have the steps soldered or glued on. The steps are 6 mm. by 3.5 mm. and can be made from 0.010 shim brass or thin styrene sheet.

Mention was made of fitting the couplers. It was found necessary to use pieces of styrene sheet to build up a pad on which to mount the couplers. The pieces were cut 12 mm. wide, 10 mm. long, but thickness will vary depending on the types of bogies being used. The vehicle described is mounted on "Roundhouse" bogies which came off a Harriman car, but can also be purchased separately. Care must be

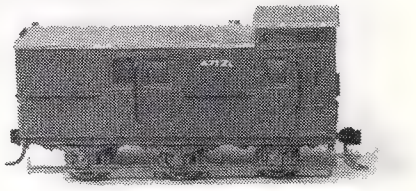




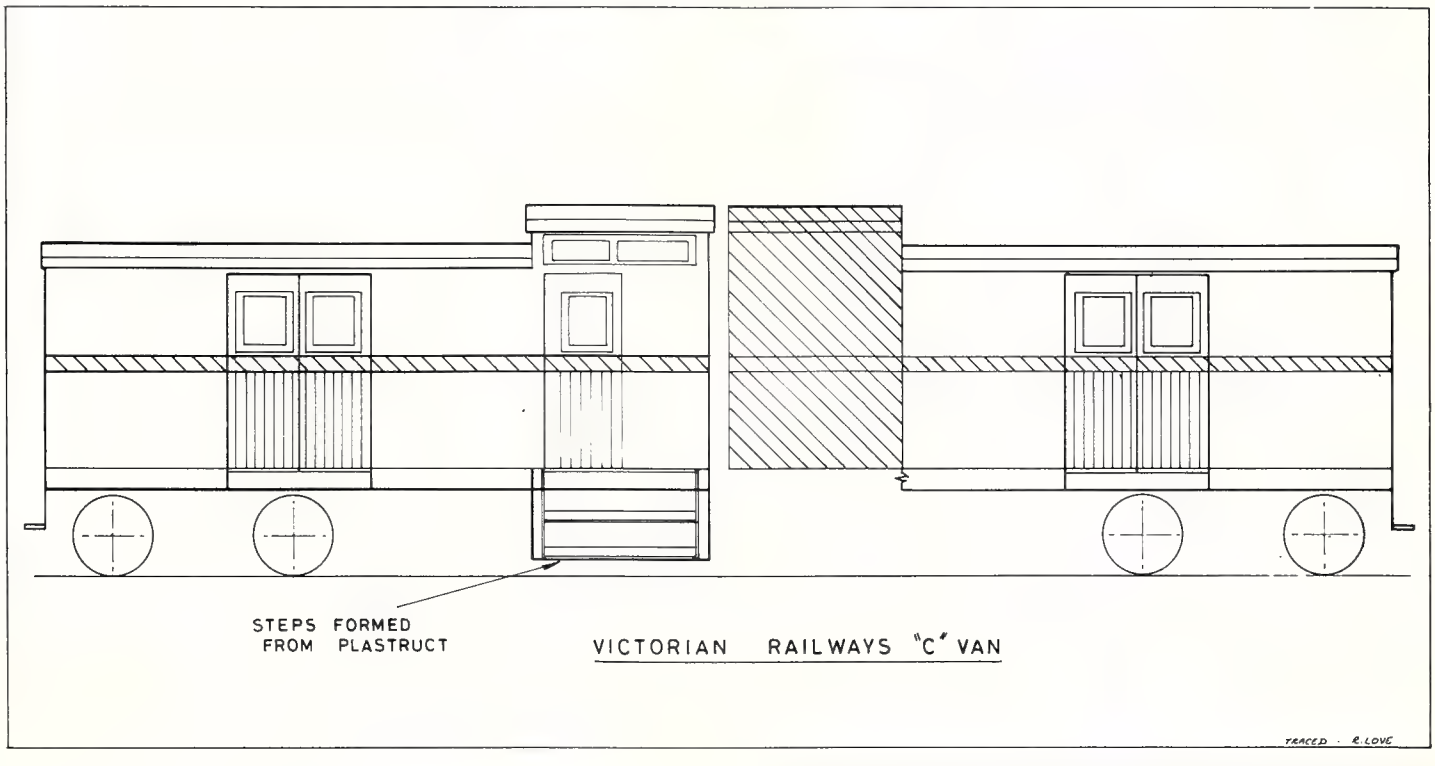
taken when mounting the bogies that the holes for the screws are drilled square to the body, otherwise the van will lean to one side when placed on the track.

Underframe detail is added using suitable commercial castings. The photographs published with this article will show location of these fittings. The vehicle was painted using "Floquil" caboose red for the body, "Humbrol" R145 grimy black on the underframe and "Humbrol" sand on the roof. The roof was "dirtied" with an overspray of black and the lettering was done by hand. The finished van is a scale 3'0" too long over the body and 6" too wide. Experienced "kitbashers" may like to take the conversion further by "slicing" more pieces out of the body to get it closer to scale. However, a good resemblance to the prototype has been obtained by the procedures outlined above. The same process has been followed to get a closer-to-scale "Z" van. The single body was cut through the centre and a new underframe built up, the one supplied being discarded. This may form the basis for another article, if required.

Prototype photographs by Graham Ball.



A Hornby 'Z' van suitably shortened (in height) as described in the article.



VICTORIAN RAILWAYS 'J' CLASS LOCOMOTIVE

Built by Graham Fraser

This model of a Victorian Railways light lines 2-8-0 won the Tim Dunlop Cup for scratchbuilt locomotives at the 1980 Sydney AMRA exhibition. The locomotive and tender are of all brass construction, being entirely scratchbuilt with the exception of wheels, motor and some commercial detail items. The following construction details illustrate some of its features:

Wheels:
The driving wheels are Stephen Poole 16mm, modified with Plastruct channel section on the spokes to give the characteristic S.C.O.'P' appearance. The lead truck has MGW wheels, while Berg's 10.5mm wheels were used in the tender.

Gearbox:
The gearbox is enclosed in the firebox and drives the third axle. It is comprised of North-west Short Line delrin worm and reverse worm gears.

Motor:
A Sagami 20:32 can motor is enclosed in the tender with a brass flywheel, and drives the gearbox in the locomotive through two universal joints.

Commercial items used:
Kemtron brake wheel,
Calscale non-lifting injector, Pyle generator, marker lamps, headlight, boiler clack-valve, whistle, mechanical lubricator,
Precision Scale gauge cluster, butterfly fire door,
MV Products headlight and marker lenses.

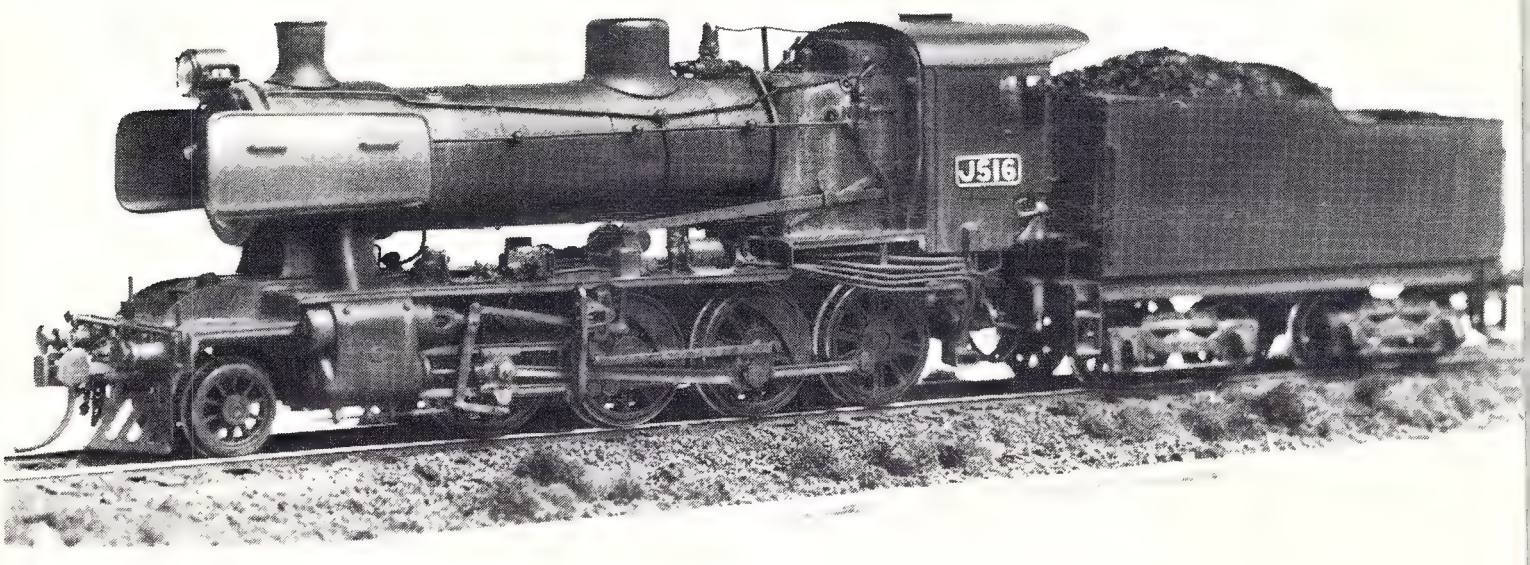
The air pump and tender truck side frames were made from scratchbuilt patterns, the actual items on the locomotive being cast in white metal.

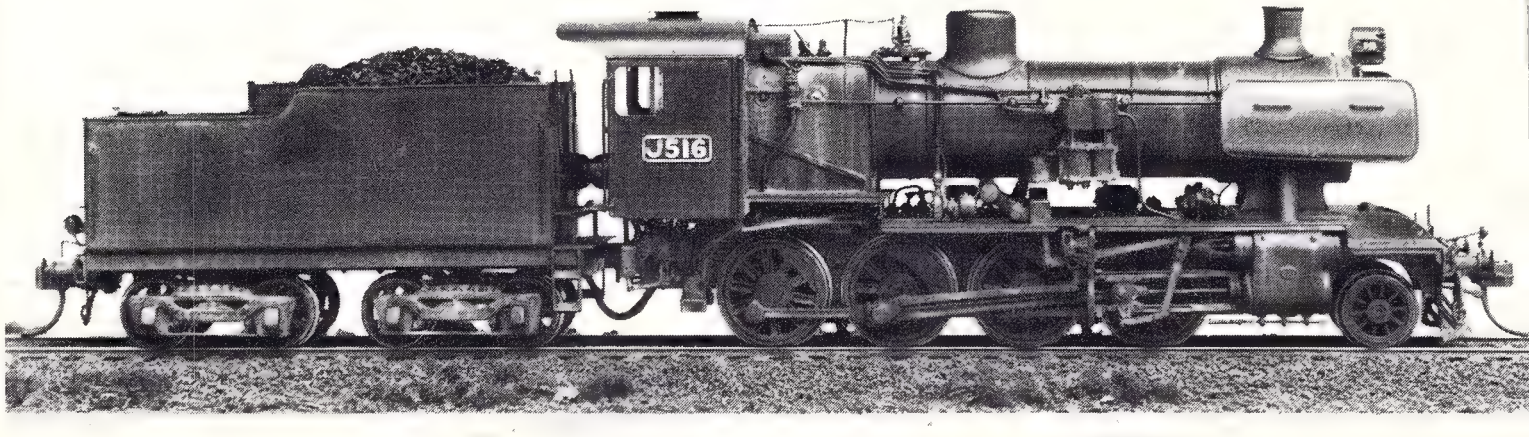
Couplers:
Kadee couplers were fitted, after the shanks were modified to suit scratchbuilt pockets.

Other Features:
The cab backhead details and cab sliding windows operate, and the number boards were photographically reduced and attached to the locomotive and tender.

Painting:
The model was etch primed and air brushed with a mixture of Floquil Grimy Black and White. Weathering was hand brushed.

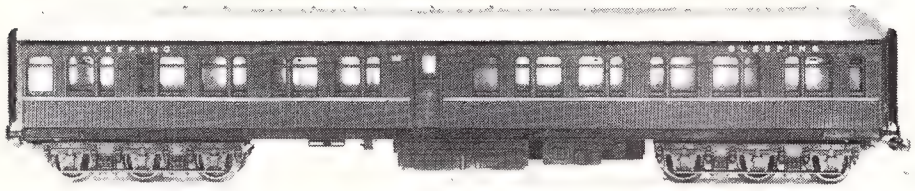
Ross Hurley.





THE LIMA CARS

In mid-March 1981 the long awaited (72'6") cars of the NSWGR were released in Australia by Lima. The 'TAM' first class sleeping car and the 'MBE' (MBX) first class sitting car have made a big impact on the hobby, for not only are they very fine models in 'ready-to-run' form but they can be altered to other codes as well as super detailed. Following is the commencement of a number of articles that AMRM will present on these models, that will guide modellers to add the superdetail as well as convert the cars to other codes . . . submissions by readers are welcome.



IMPROVING THE LIMA CARS

Here is a cheap and easy way to make your TAM's and MBE's look better, just by adding a few coats of paint.

The first step is to remove the roof and windows. The easiest way is to push in at the lowest point of the windows using something that won't scratch them (a pencil is suitable), and pull the roof up with the other hand. When the roof is off, the chassis can be easily removed.

Remove the wheels from the bogies and spray or brush paint the chassis and bogies with Floquil's Engine Black. This removes the plastic look of the underframe.

Take the roof and mask off the windows and the gutter. By masking the gutter now it eliminates having to paint it black later. When the masking is complete the roof can be sprayed with Floquil's Old Silver. When the silver is completely dry (overnight) the ends can be masked off and sprayed with Floquil's Rust. When this coat is dry all the masking can be removed. Spraypainting was done with a Badger airbrush, using a car tyre pumped up to 60 psi.

The toilet windows now have to be painted. Floquil's Reefer Grey is a suitable colour for this. Just paint it onto the inside of the windows in the appropriate place. On the TAM's the toilet windows are the far left on each side, and the single on the left of the door on one side: on the MBE the two single windows on the far of one side and the single on the far left of the other.

The roof and chassis can now be placed back onto the body. The same wheels can be used, but for better scale appearance the flanges should be turned down. This can be done on a lathe or in an electric drill.

Standard height Kadees can be used, but to obtain the correct height they must be mounted on top of the old Lima coupler shaft. Also, a small amount of plastic must be removed from between the buffers for Kadee clearance. Care must be taken with the position of the Kadees on the coupler shaft to ensure that the buffers do not lock when negotiating curves. Kadee No 5, 6, 8 or 16 may be used, with the position on bogie coupler shaft being determined by the length of Kadee.

Now, when the TAM or MBE is back together, it can be weathered. A fine spray of grimy black on the roof and bogies and the model is complete, looking much better.

Geoff Kemmis

About the models . . .

The following is background information that may be of assistance to you when painting or lettering your TAM or MBE coaches.

Coach Number 559 started life as MBX559 and was built by Meadowbank Engineering and commissioned into service on August 24, 1928. On May 31, 1940 it was converted under contract to MBE559. It was condemned on August 11, 1975 and has been used as the meeting car for unions at Eveleigh since then. TAM 1882 was built by Meadowbank Engineering and commissioned into service on March 18, 1929.

The MBE model as produced is not correct. In one corner there are three separate windows. They are, in turn, the gents' toilet, the gents' washroom and half a sitting compartment. In the diagonally opposite corner is one window which is the combined ladies' toilet and washroom. The next window is a double window. This is incorrect and should be a single window. The window of this pair closest to the carriage end should be filled in. The underfloor details on both models are identical; however, the MBE should not have the pressurised water tank which is used for the showers on the TAM.

The model as produced represents the car with the T and G cedar sheathing and canvas roof covering. The roof was painted 'Dark Navy Grey' when originally supplied. Originally the cars were repainted every 3-4 years although this has stretched to 10 years in recent times. The roof colour may be mustard or grey when canvas is used depending on what paint was available. In latter years the grey has not been used. With introduction of malthoid on the roof, about 1940, mustard or silver, and on some occasions white, paint was used on the roof area covered by the malthoid. The malthoid was rarely used on the curved carriage ends due to difficulty in gluing it down on the curved surface.

The resulting colour combinations are mustard ends and roofs, mustard ends and silver roofs, all silver or all white, or all 'Dark Navy Grey' on the roof and ends. The cars were repanelled with Masonite over the T and G cedar sheathing and the crownlights filled in during the 1960's. Some crownlights had been replaced prior to this.

Trevor Moore.

BIOGRAPHY: NSWR "MBE/MBX" First Class Cars

The MBX design, built between 1917 and 1929, represented one of the 8 standard non-urban NSWGR passenger car types recommended during the 1920s for further construction. The MBX cars, intended for use as express passenger stock, were employed in either original or converted forms on suitable services until the coming of the air conditioned fleet after the Second World War.

As the standard first class sitting car in the 72'6" series, the MBX accommodated 48 persons in a mixture of saloon and compartment style seating. The cars each tared 45 tons and were load rated at 48 tons. Delivered by various builders, they carried road numbers 61, 62, 82, 105, 124, 549, 559, 599, 616, 631, 647, 652, 656, 712, 775, 778, 796, 812, 813, 839, 841, 2104 and 2105. The class was made extinct by reclassification to MBE (10 cars) during 1938-39, to CS (7 cars) in 1959-60 and to RBX (5 cars) and AAH (1 car) during 1934. Later, some the converted vehicles underwent further alteration.

Most of the derivative codes retained the "flavour" of the MBX layout but those rebuilt to MBE type became full compartment cars. It would seem that at least some of the units which became RBX type had been fitted with kitchens as early as 1930, and cars 61, 82 and 124 may have been so equipped when built.

This article places emphasis on those codes of passenger car which can be modelled from the Lima HO scale MBE coach. In its purchased state the model can be employed for all MBX cars and all MBE cars as converted. It should be noted, however, that cars 599, 2104 and 2105 featured outside truss rodding in deference to the cantilever underframe arrangement adopted for the remainder of the class. Car numbers relevant to the MBE code were 62, 549, 559, 631, 656, 712, 812, 813, 839 and 841.

The Lima car, which possesses crown lights and matchboard panelling, can also be used for codes AAH (car no 7, ex MBX.2104) and

Continued on page 42.

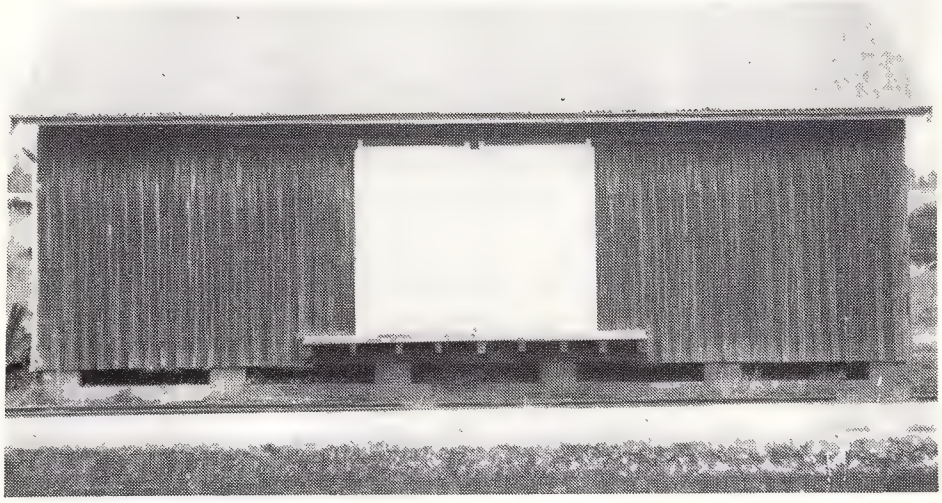
KIMBERLEY GOODS SHED

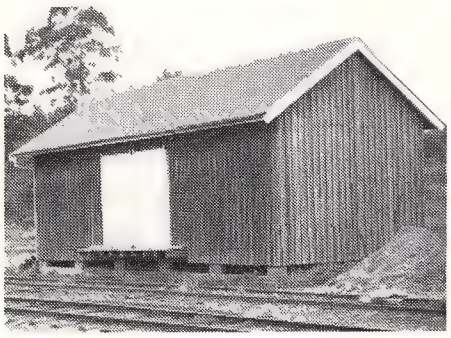
Goods sheds are a rather commonplace structure on any railway system, and Kimberley in Tasmania is no different from any other country area where a building is required to house commercial commodities (goods) during the phase of trans-shipment between road and rail, and vice versa. In most instances the goods shed will only hold the goods for a few days during this trans-shipment period. Generally goods sheds are adjacent to a rail siding to allow a rail vehicle to stand for the period of at least one day while the goods are moved from or to the goods shed into or out of the wagon. Naturally road access, usually via a dirt road, is standard for goods sheds.

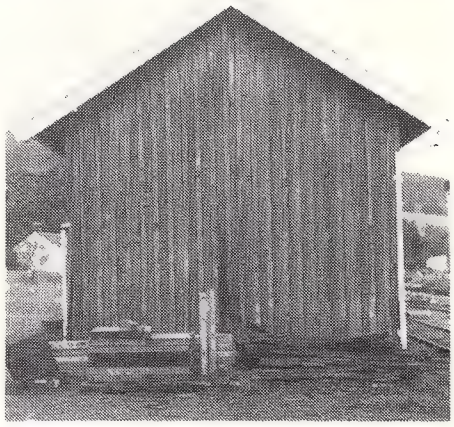
Basically, goods sheds are the same all over Australia, except that local material availability generally governs the outside appearance of the structure. South Australia, for instance, in many areas uses stone, as does the V.R., where the required rock is available. Tasmania, however, used timber in the main, for the island has been, and still is, gifted with large timber deposits.

The Kimberley goods shed has lapped timber sides, in that the vertically attached planks average 7¼" in width while the gaps in the planks are covered with 3" battens. (North-eastern market lapper timber siding. Ed.) The timber is left natural (i.e. is naturally coloured weathered grey), the corrugated iron roof is red, the guttering blue while the downpipes, facia and doors are painted white.

The structure was researched in March 1976 by Jeff Moonie, who also supplied the photographs.







BIOGRAPHY: NSWR "MBE/MBX" First Class Cars

Continued from page 41

RBX (cars 61, 82, 124, 616 and 647). The AAH is the kitchen-diner and attendants' car on the Commissioner's train, and is in near-original MBX condition externally. Of the RBX cars, 124 became the first NSWGR air conditioned vehicle during 1936, the power initially coming from bogie louvred van MLV.12198 especially modified for this purpose.

A further derivative example which can be modelled using the Lima coach is that of FE.712. Other codes based on the MBX/MBE design, such as the CS and MCS, were heavily rebuilt without crown lights and with "smooth" panelling, this latter feature appearing on many of the MBE cars in more recent decades.

The external colour scheme of the MBX car was originally varnished teak with gold leaf lettering and lining. Then came tuscan red (with lemon lining), with the possibility that some cars may have received the duotone of tuscan red and russet. The MBE and other derivative codes carried the livery relevant to the particular period.

Contemporary practice for the cars remaining in traffic is generally that of tuscan red with buff lining above and below the windows. Car AAH.7 appears in Indian red livery.

Steam heated coaching stock was employed by the NSWGR during the 1950s and through to the mid 1960s. At least 4 MBE cars, nos 549, 559, 813 and 839, were fitted out in this manner, the distinguishing feature being the large diameter piping along the underframe.

Many of the MBX cars underwent major external alterations during their lifetime, and today the majority remaining in service differ greatly from the original style. The Lima model can still be used as the basis for most versions, the degree of surgery necessary being dependent upon the class of vehicle and period modelled.

Paul Rogers.

TRADE PRACTICES ACT 1974

The above act is now in force and contains strict regulations on advertising

It is not possible for this company to ensure that advertisements which are published in this magazine comply with the Act and the responsibility must therefore be on the person company or advertising agency submitting the advertisement for publication

In case of doubt, consult your lawyers

SCR Publications.

HANDY HINTS

Weathering Wood:

a. Wire brush in the direction of grain. Vary to show different supposed ages of models;
b. Study photographs of model's prototype for broken or cracked wood and simulate using a scalpel or sharp knife. Try not to overdo and spoil effect;
c. Mix with 10-20 mls. of isopropyl alcohol (rubbing alcohol from chemists) a few drops of black leather dye. Brush this on each piece of wood separately to give the variation on prototypes.

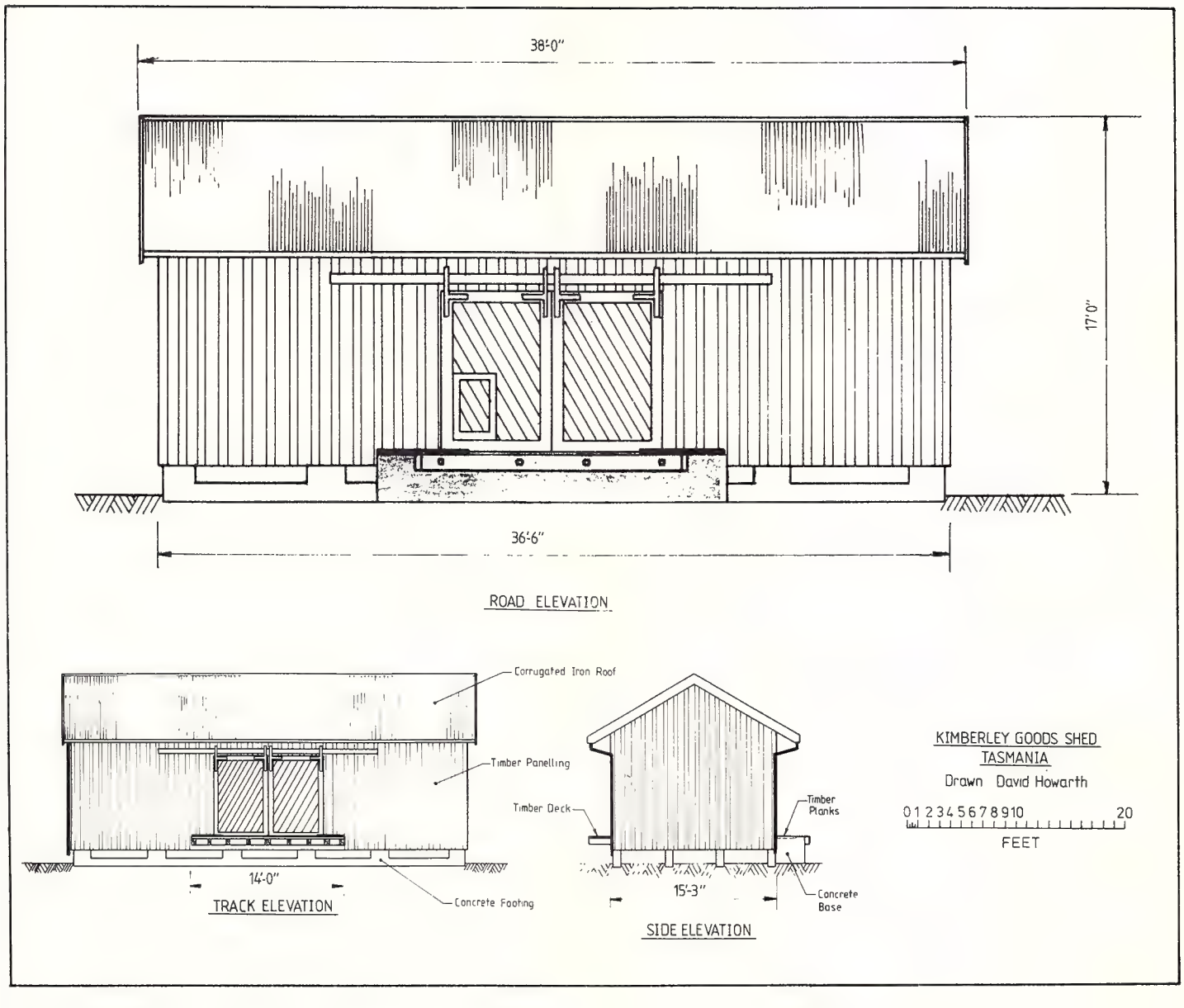
This stain soaks in, not giving that "painted on" look. For painted structures stain first, then apply a light coat of paint. Light rubbing with fine sandpaper will expose some of the weathered wood and the timber gets the effect of not having been painted for many years, if this is desired. By now you should have made a new structure look weatherbeaten or old and delapidated according to what was required.

Peter Mackenzie

NSW WAGON COUNTDOWN—19

IN 1962, the NSWGR had 50 'BME' type flat wagons on its books. By 1979, only 15 units of this code remained on the NSWPTC register.

Paul Rogers



HAND SIGNALLING

Both in complex marshalling yards and in country branch line stations there are some locomotive movements for which there are no semaphore signals, and such movements are authorised by hand signals, sometimes with a flag or at night with a hand lamp.

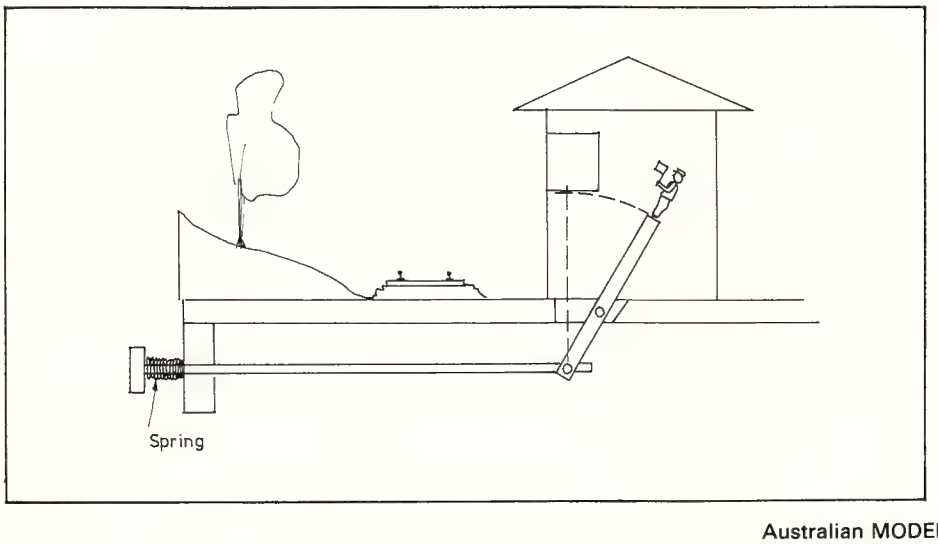
In the first case these are normaly given by the shunter working the points, and in the second case by the signalman either from the signal cabin or from a ground frame (shed). With the growth of modern equipment at marshalling yards and the closure of most branch lines this practise is dying out, but although very few people have the space to model a large marshalling yard most layouts include, or consist entirely of a small country branch line station in Pre Nationalisation days, where such a practice would be very appropriate.

Despite this very few modellers introduce hand signals in a form where they can be very useful in addition to the existing semaphore signals by being both fascinating to the spectator and very satisfying to the operator.

A suggested basic arrangement is shown in the diagram which can obviously be adapted to suit one's individual requirements. As most model signal cabins are quite dark inside, the signalman will be out of sight when the mechanism is in the normal position, when the plunger is pressed the signalman carrying the flag moves from the back of the cabin where one imagines he has just set the road, leans out of the cabin and signals to the driver. A similar scheme could no doubt be used in connection with the single line token.

Whilst some modellers may dismiss this as a gimmick, and unsuitable for the serious layout, I do not see it as such, as any more than working signals which after all is precisely what it is.

John Illingworth



NSWR "TRC" REFRIGERATOR CARS

by Paul Rogers and Bob Gallagher

This article is intended as the first in a series which will provide prototype data on commercially available models. The column has been prompted by the rapid growth in the number of items of N.S.W. motive power and rolling stock, in both ready-to-run and kit forms, over the past few years.

As introduced to service TRC 3235 (later recoded TRC 31101) decked-out in silver with black underframe and metal work. Photograph by courtesy of the State Rail Authority of N.S.W.

As part of its rolling stock rehabilitation programme following the Second World War, the New South Wales Government Railways acquired 260 TRC class bogie refrigerator cars for systemwide use. These vehicles, intended primarily for the transfer of meat between country abattoirs and metropolitan receiving centres, were also authorised for general purpose work. Three batches were constructed in response to contracts placed during July 1948, December 1949 and May 1950; their details are shown in Table 1. Classleader 3235, delivered in May 1951, was renumbered 31101 during January 1952. The allocation of block numbers for the TRC vans appears to have been a last-minute decision, as contemporary freight vehicles such as the G series open wagons received recycled serials in broken (but generally chronological) order. All units were in service by the end of 1955, the 31266 to 31300 grouping being the last delivered.

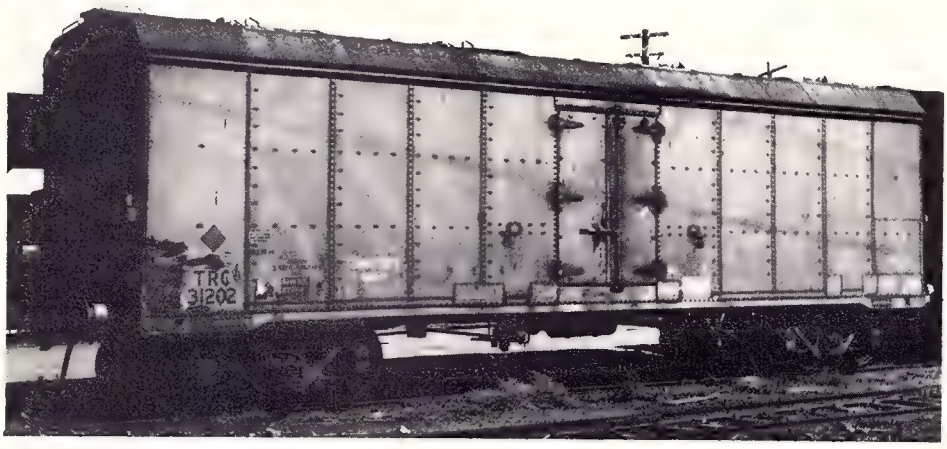
Steel components formed the underframe, body framing and external panelling of the TRC vehicles which rode on 2BR type 5'9" wheelbase "ride control" bogies for operation on express, mail and passenger trains as well as conventional freight workings. Unlike earlier designs of refrigerator cars, the TRC van was bunkered entirely through tanks situated between the roof and the ceiling. Each of the eight tanks served a wooden tray which, in turn, fed condensation (or brine, if salted ice was used) through galvanised steel ducting placed between the inner plywood walls and the outer steel panels. Escape of water from the car was by means of floor gutters and associated outlets; insulation of the van was carried out by means of fibreglass blanketing, and steel facing was applied to the inner plywood body and door surfaces.

The design of the TRC permitted better air circulation and temperature control throughout the vehicle than was possible with more orthodox units which relied solely on end bunkers, and the rated capacity of 32 tons for the new van represented a significant increase in payload over the 19-20 tons of its nearest rival, the MRC. Like earlier reefer designs employed on the New South Wales system, the TRC van was equipped to handle both suspended and floor-borne cargo.

The value of the TRC vans lay not only in their capacity and refrigerant qualities but in other areas as well. Their appearance in traffic, coupled with the existing stock of MRC cars, enabled the N.S.W.G.R. to conduct a large fleet of refrigerated units possessing uniform marshalling and running characteristics. Indeed, the 1950s generally witnessed the solution to the problem of operating bogie vans at express speeds, a worry of the railway administration which dated back to the early 1930s when difficulties were encountered with the arch-bar trucks under refrigerated cars and louvred vans. It was necessary during that decade to authorise new construction (for refrigerator cars) and modifications (to louvred vans) to overcome the problem, but the coming of international hostilities and a shortage of high speed bogies in the immediate post-war era led to a limited number of vans which could be rated for dual purpose (passenger/freight) running. The situation in regard to refrigerator cars had been largely resolved by 1951 with the commissioning of numerous MRC units, so that the all-steel cars of the TRC group initially strengthened the fleet but later replaced many of the older MRC vans which had not been upgraded to top-bunker status.

Quite early in their career, the TRC vans established some commendable performances. In 1952/53, one unit brought a shipment of quick-frozen products from Glen Innes to Sydney in record time; during the same financial year, another car transported chilled peaches from Griffith to Brisbane (a distance of some 1,000 miles) without re-icing, and followed this trek with a run from Brisbane to Sydney with a consignment of chilled beef.

Traditionally, N.S.W.G.R. refrigerator cars



TRC 31202 at Newcastle on 3.4.1978. The 'TOMATOES ONLY' lettering in white on a silver body. Sister vehicles 31104 and 31241 had the same lettering for the same traffic. The red diamond is clearly defined above the coding. Paul Rogers photo.

have worn white livery, and the TRC vans were no exception, although many received silver as the basic colour scheme. They were not affected to any great degree by the decision of the Public Transport Commission to adopt blue for freight wagons in the early to mid 1970s: the only TRC vans to date to be verified in the blue livery are 31294 and 31320 (the latter only after reclassification to ABC for biscuit traffic). We believe, however, that other TRC vans may have carried the blue scheme, and at least one has been reported in red livery.

One prominent feature of the TRC was the red diamond displayed above the identification data on the sides of the vehicle. This symbol certified that the car could operate with coaching stock at high speeds, the inscription adjacent to the diamond reading: "THIS VEHICLE MAY BE ATTACHED TO EXPRESS, MAIL AND PASSENGER TRAINS". Other goods vehicles employed for similar tasks, such as LLV and MLV louvred vans, MBC and MCV box vans and the MRC refrigerator cars, also carried the diamond and associated legend.

Their ability to operate on both passenger and freight trains makes the TRC vans an attractive modelling proposition. When used in conjunction with coaching stock certain rules and formulae applied, amongst these being the requirement for the vans to be placed at the rear of the trailing brake van when the locomotive was fitted with screw drawgear and behind the engine when the motive power possessed automatic couplers. When a TRC van and a screw-coupled car became adjacent vehicles on a train, an Alliance link coupling led from the refrigerator car's knuckle coupler bollard to the drawhook of the other unit.

The large quantity of passenger rolling stock not fitted with automatic couplers meant that buffers were a necessity for the TRC vans. Although it seems that early members of the class lacked this facility, the deficiency was quickly overcome. Tail lamp and target plate brackets also became standard equipment.

Interesting compositions may be created by combining TRC cars with the other types of freight wagons marked for passenger train operations. One point to be noted, however, is that bufferless goods vans needed to be marshalled between similar units fitted with buffers. There was a basic ratio set for the attachment of freight vehicles to passenger trains, and although variations in these formulae occurred over the years, the following notes will suffice for general modelling purposes. I might mention that these statistics cover all types of goods wagons authorised for passenger running, and not just the TRC vans.

The general formula where the speed of trains exceeded 60 m.p.h. was 1 unit per 100 tons of coaching stock conveyed, subject to a maximum of 3 units when over 300 tons of coaching stock was conveyed. When 55-60 m.p.h. represented the speed limit of the train, a maximum of 4 goods vehicles were permitted, provided that more than 250 tons of passenger stock existed in the formation. At speeds between 50 and 55 m.p.h., up to 5 goods vehicles were allowed in relation to at least 200 tons of coaching stock. Below 50 m.p.h., no limitation applied, subject to a minimum of 150 tons of passenger type vehicles. There have, of course, been occasions when actual consists were at variance with these rules, the Central West Express during the 1960s at times being an example of such exception.

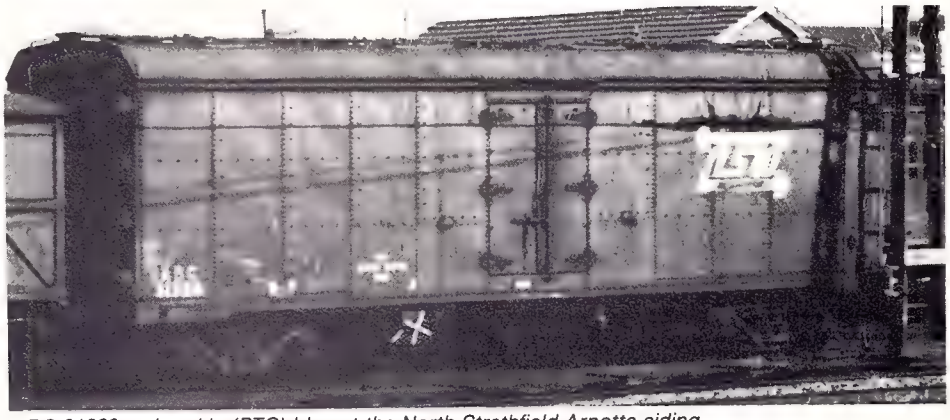
One factor must be borne in mind concerning the attachment of freight vehicles to passenger trains. Usually, this only occurred at major centres where brake examinations could be undertaken by nominated employees. But in some cases, for instances one could quote an abattoirs or cannery "along the line", there was provision for attachment and detachment en route between principal towns, the necessary activity being undertaken by the guard of the train concerned.

Until a few years ago, the TRC vans were available for passenger/freight train running. However, their general condition, coupled with the problems of "three-piece" bogies, has led to a severe downgrading since the mid 1970s. The Working Timetables of 1978 gave them a "B" group freight speed rating of 100 km/h, but this was soon reduced to "D" group status (maximum of 70 km/h), and thus effectively reduced their usefulness considerably. Some have been fitted with roller bearing bogies to enable their use on specific tasks, but most vans are now employed in the Sydney area for metropolitan box car service and departmental traffic. Car 31320 was reclassified to ABC early in 1974 for biscuit traffic based on the North Strathfield factory of Arnotts Ltd, this van being repainted blue and decorated with the large version of the Public Transport Commission's Mk. 1 logo in white on the bodysides of the car near the "right hand" ends. It remains in such condition as at January 1981. Car 31294 also received the blue livery, but not the logo, and is now a resident of the Petersham Shunters Training School. The underframes of some TRC vans ended their days as flat cars within the confines of the Port Kembla steelworks of Australian Iron and Steel. By July, 1980 only 82, of the 260 strong class, were still in revenue earning service.

The accompanying photographs display variations applied to the TRC vans as far as colour schemes, logos and lettering are concerned.

Models

The TRC has had quite a following among model manufacturers. An early multi-piece HO gauge kit was supplied by Protype in white



ABC 31320, painted in (PTC) blue at the North Strathfield Arnotts siding.

Silver bodied TRC 31183 at Gunnedah on 9.4.1978. The Mk. 1 logo in blue with white lettering is on the side. The red diamond is visible above the wagon code. Paul Rogers photo.

Silver TRC 31127 at Blacktown on 23.10.1977. The Mk. 1 logo in white with blue lettering on a light blue circle adorns the weather-beaten side. The red diamond is just visible above the wagon code. 'METROPOLITAN GOODS TRAFFIC ONLY' is stencilled (in white) on the side. Photo by Paul Rogers.

metal, while the same scale saw a one-piece body casting and separate underframe unit in polyester resin from Friedmont. Other HO scale representations currently available include a multi-piece body kit from TRAX and a white metal kit from Bergs Models.

In N scale, Friedmont currently market a one-piece body casting and separate underframe unit in polyester; in effect, a scaled down replica of the HO scale van.

Conclusion

From these brief notes, it can be seen that the TRC van is an interesting modelling proposition in many ways, and many N.S.W. oriented layouts should have at least two or three units of this class on them. On a more sobering note, the demise of large quantities of this class of vehicle in recent years, coupled with the downgrading of many of the remnant, is yet another illustration of how a relatively modern freight car design can become virtually extinct overnight as a result of railway modernisation plans.

SUNDRY NOTES

The examples given below provide additional variations to those shown in the photographs. All of the vehicles were sighted during January 1981. Readers should observe that the Railways of Australia reclassification scheme, as envisaged, determined that all TRC vans would be recoded to NRTA. However, it has become necessary to adopt a new code, NRTF, for units fitted with roller bearing bogies. The same thing has happened with bogie louvred vans: the additional codes of NLMF and NLLF have appeared to cover those MLV and LLV units fitted with roller bearing bogies, and thus distinguishing between these units and those plain bearing members of those classes recoded to NLMA and NLLA respectively.

A plan of the TRC can be found in the March/April 1969 issue of AMRM.

TRC Miscellany — 1981

Car No.	Description
TRC.31153	— silver; red diamond; no logo; fitted with 2BR (Andrews) bogies. Car stencilled: "METROPOLITAN GOODS WORKING ONLY"
NRTF.31247	— silver; no diamond; no logo; fitted with roller bearing bogies; Car stencilled: "METROPOLITAN GOODS WORKING ONLY"
TRC.31285	— silver; red diamond; no logo; fitted with roller bearing bogies painted blue
NRTA.31299	— silver; red diamond; no logo; fitted with 2BR (Andrews) bogies

Note that in all cases mentioned above the silver livery has dulled and weathered to a dirty grey colour.

TABLE 1 — "TRC" REFRIGERATOR CARS

Builder	Quantity	Car Nos.
Tulloch Ltd, Rhodes, N.S.W. (Contract 6/1948)	50	3235 (31101), 31102 — 31150
Commonwealth Engineering P/L, Granville, N.S.W. (Contract 2/1950)	150	31151 — 31300
Metropolitan Cammell Car and Wagon Works, Birmingham, England (Contract 5/1950)	60	31301 — 31360

A future article in AMRM will describe the underbody detail on the TRC. A photograph of the TRC roof appeared in the March/April 1981 issue of AMRM.

REVIEWS

"Handyman's Cabinet". Obtained from Woolworths. Price: $19.80.

The Handyman's Cabinet is a box with drawers in it, containing an assortment of nuts, bolts, washers, split pins, and self tapping screws. These items were set aside and the cabinet was then used for the storage of various modelling parts and detail items.

The cabinet measures 270mm high, 235mm wide, and 160mm deep. It contains 24 trays arranged in a row of four horizontally and six vertically. A set of partitions is supplied enabling each drawer to be divided into three separate compartments if desired. The cabinet also features a carry handle, although care must be taken as the drawers fly open easily.

Other cabinets like this have been seen in the various hardware stores, but I favoured this one because it had more drawers of a smaller size, plus the fact that the drawers can be divided up.

It has proved to be most useful for storing a vast array of small items neatly. With the addition of small labels on the drawers, items can be located quickly. Recommended to all modellers.

David Allen

Steam buck saw by Evergreen Hill Designs. Sample supplied by McBees Hobby Centre, PO Box 144, Coburg 3058. Price: $4.90.

Evergreen Hill Designs produce an extensive range of typical American logging equipment and tools. The steam buck saw is one of those pieces of equipment. As far as I can ascertain a buck saw consists of a steam cylinder which was connected to a stationary engine. The cylinder drove a long blade similar to a cross cut saw. In fact a buck saw could be described as a steam driven cross cut saw. Perhaps a reader could supply some more information.

The kit consists of four very fine and delicate white metal castings, a stamped brass saw blade and some pieces of wire. These are packed in an attractive blister pack and include detailed assembly instructions.

Assembly, once the instructions are clearly understood, is simple. Care must be taken as the pieces are very small and fingers seem to become gigantic very quickly. Using a 'super glue' it took about fifteen minutes to assemble the buck saw.

Assuming the complete Evergreen Hill Designs range is of a comparable quality these models would be necessary for a logging layout or logging area to add the final detailed appearance.

Ian Thorpe

V.R. 'GY' side frame casting, by Broad Gauge Models, PO Box 136, Boronia. 3155.

Scratchbuilders are always looking for parts that make the building of wagons easier while also

producing a better model. When building four wheel rolling stock it is general practice to add each axle box casting to a solebar, taking care to keep the axles square and level. This task will be made easier by the release of this set of casting by Broad Gauge Models.

The casting, in a bronze material, contains the channel iron solebar, with struts, wagon body support struts, axle boxes and hand brake lever pivot bracket. The casting is clean and in shape. The detail on the axle box is two sided and a (pin-point) axle bearing hole is preformed. Although the detail, in general , is sharp the spring detail is hard to see. The wheelbase is 40mm while the sole bar is 76.5mm long. The axleboxes are positioned equidistant from each end.

The castings will be made available with a set of spoked Northyard RP 25 wheels, specially imported by Broad Gauge Models.

Bob Gallagher

Victorian Railways BP, BMX and BLX Box Vans in HO scale manufactured by P.J.M. Models Sample obtained from Viaduct Hobbies, Flinders St., Melbourne : Price: $4.95.

The kit assembled for this review was labelled BP, although it can be assembled into a BP, BB, BMF or BMX van, depending on the type of bogies and lettering used.

There is also a kit for BMX 1 which has the double doors arranged on the far right of the body. Only one prototype was constructed by VR.

The third kit is for a BLX or BLF fan, which is similar to the BP, except that it is slightly longer and has a VLX-type mansard roof.

The new codings for these vans are as follows:

BP — VBPY
BMF — VBAY
BMX — VBAX
BLX — VBBX
BLF — VBBY

The castings appear to be made of Plastibond, and they are of good quality. They are square and of uniform thickness. There are two sides, two ends and a partly detailed floor. Two pieces of balsa are supplied, one is to be glued to the floor to aid assembly of the body, the other is to be shaped by the modeller to represent the roof. The pieces go together quite easily with a minimum of sanding and fitting, using 5-minute epoxy. The model's measurements correspond with those of the prototype, except for the doors, which appear too bulky. The characteristic steel pressings, however, are quite nicely executed, and it certainly beats scratchbuilding if you want several vans quickly.

The instructions cover the assembly adequately; however there are once again no hints outling the history of the prototypes, choice of bogies and lettering, etc., which seems a pity.

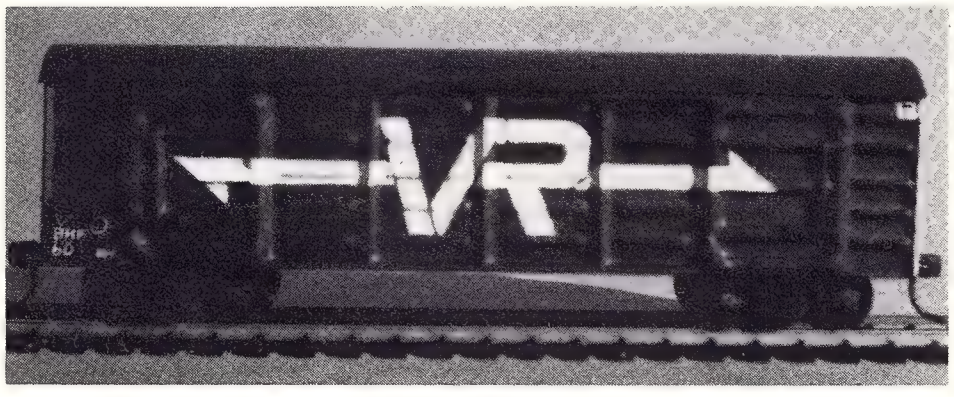
I used Roundhouse rollerbearing bogies with 10.5 mm disc wheels, and I finished the model in Floquil Boxcar Red. I also used a thin card overlay over the balsa roof to obtain the look of a steel roof.

All in all the kits represent good value for money.

Peter Eisenhut

Volvo F12 prime mover and box trailer in HO scale by HERPA. Sample supplied by The Engine Shed, 5 Carrington St., Box Hill. 3128 Price: $6.25.

This ready to use model is made from polystyrene



and is fully assembled and painted. The model consists of a Volvo F12 prime mover which can be separated from the box trailer. The model is superbly detailed, up to the now usual Herpa standard, and includes rear view mirrors, detailed dash (left hand drive), insignia medallion (on the grill) and full undergear including fanbelt, generator, drive shaft, muffler, fuel tank and diff. The wheels freely rotate and the radial tyres are branded. Wheelbase is 37mm long, and dual drive wheels are fitted.

The box trailer is 143mm long, 28.3mm wide and 26mm high and has end doors which open and close. The box is mounted on three single wheel axles, and a self support bracket (that clips out of the way when the van is on the road) is also fitted. A spare wheel holder and spare wheels are included. Detail is again superb and includes blinker and brake lights.

The duo is painted in a green colour, the cab interior being light brown, and the trailer frame is black. The trade names printed on the trailer include General Electric (on one side) and NORYL, LAXAM and VALOX (on the other side) is in white and the silk screen printing is flawless.

Another fine model from Herpa.

Bob Gallagher

IBERTREN Spanish 1800 Class C-C Diesel in N Scale. Our sample supplied by Bergs Hobbies, Church Street, Parramatta. Price: $39.95.

In 1953 Alco-General Electric introduced their FD-3 "World" locomotive. This unit was designed for use on all railways from meter gauge to 1676mm (5'6") gauge. The cab units incorporated some of the body styling of the PA and FA series and were powered by the 251 engine. Over the years several variations of the design were built by Alco and their licensees. One popular option was the addition of the second control cab at the rear. The "World" locomotive was a huge success and, in all its variants, was bought by railways in Argentina, India, Greece, Spain, Pakistan, Peru and South Australia and New South Wales in Australia. 337 units were built and the majority are still in service.

The single cab demonstrator was tested on, and subsequently bought, by RENFE, Red Nacional de los Ferrocarrilles Espanoles, the Spanish National Railways. It became number 1615, one of 17 units in that series.

In 1958 an additional 24 units were purchased with the second cab and numbered in the 1800 series. These units had their horsepower rating increased to 1980, up from the 1790 of the 1600 series. Top speed of both series is 105 km/h (65 mph).

The Ibertren N scale model is of number 1808, one of a group of 18 locomotives built from May to July, 1958.

The overall proportions of the model look good, though the body is scaled 76cm too short and sits somewhat high to clear the mechanism. It is also scaled 30cm too wide to permit the bogie-mounted motor to swivel fully in tight curves. It will negotiate a 195mm radius.

Modellers may be interested to note that Ibertren, until recently, used a centre stud contact system, a la Marklin, for their N gauge trains, but used 12V DC rather than alternating current. This is now called the "3N" series. Recently, Ibertren introduced the "2N" series which uses the conventional 2 rail pickup system. All models are available in both series.

The power arrangement follows Lima designs: a 3-pole motor is mounted to the rear bogie and drives all three axles through a gear train. All wheels on this bogie have traction tyres. The motor is a conventional type, not unlike Minitrix in construction, and runs quite smoothly.

Power pickup is via the six wheels of the front bogie. This system causes reliability —especially on plastic frog turnouts — to suffer somewhat. Top speed is rather high and there is a pronounced wobble, at least in the example tested due to non-concentric traction tyres. Because of the motor mounting method, large portions of the chassis are cut away and the weight lost could have been used to advantage in improving pickup and pulling power. Substitution of another chassis will solve all these problems.

The body moulding work is clean and paint and finish of good quality, except that the edges of the stripes are a little ragged.

The obvious usefulness of this model for conversions will not go unnoticed and it can be used in both freight and passenger service in correct prototype on any continent, except Africa, so far as we can determine.

Paul Ingraham.

Decals for South Maitland/Newcastle area non-air coal hoppers, by M n'J Decals. Samples supplied by Import Hobbies, 4 Windemere Court, Albany Creek. 4035. Price: $1.00 per sheet.

One of the characteristics of the non-air hopper, used by the South Maitland Railways to carry the precious black coal from the mine to the shipment point or the washing and grading plant, was the varying size, colours and marking of the hoppers. Similar hoppers were also used in the Illawara area.

The hoppers consist of an underframe which contain the axles and the coupler, and a hopper which can be lifted free off the base by means of lifting eyes on the hopper and unloaded via the bottom discharge door into either the ship's hold or the coal dump area. The underframes are made from either timber or steel but generally the hopper are of timber construction with steel bracing. The sizes vary greatly, and a coding system was instituted and stencilled on the side of the hopper. Basically it was —

S — Small Up to 7 tons
SM — Small Medium Up to 8 tons
M — Medium Up to 8½ tons
L — Large Up to 10 tons
LL — Extra Large Up to 12½ tons.

Although the hoppers are similar in design to the standard NSWGR 'LCH' hopper, research has shown that virtually none of the private hoppers are of similar dimension, although many modellers are using the 'LCH' to represent the non-air hopper. (The subject of the non-air hopper is discussed more fully in the Australian Railway Historical Society Bulletin No. 465 — July 1976.)

As mentioned the hoppers are painted varying colours and are identified by specific lettering (or branding) to signify the owner or mine from which they work. Over the years some hoppers were repainted with different branding being applied. In some instances time wore away the top layer of paint and two distinct codes could be seen. There were at least 72 differing brands.

In many cases a specific letter of the alphabet was used to signify the brand, and the decals under discussion represent five of these.

Decal pack X001 contains decals for three hoppers branded 'A', 'B' and 'H', the first two in white and the latter in yellow.

Decal pack X002 contains decals for three hoppers branded 'CC', 'E' and 'H' all in white.

'A' coding represents the Aberdare mine
'B' coding represents the Brown organisation
'CC' coding represents Cessnock Collieries
'H' coding represents Hebburn.

Each sheet contains the feature code letter, which in HO scale is 2'3" high, four sets of wagon sizes (L, LL, S, M) and four lines of numerals for numbering the hoppers. The application of the decals is described on the rear of the card heading sheet, along with a few helpful tips for preserving the life of the decal. The feature letters have the letter characteristic used on the prototype. These decals are only available from Import Hobbies.

Bob Gallagher

H&M Loco Tester for HO/OO gauge. Sample supplied by St George Hobbies, 504 Rocky Point Road, Sans Souci. Price: $34.50.

To test or run-in a locomotive is not an easy task. The base requirement is a section of track (a circle would be better), a controller and a lot of perseverance. Testing the loco by running up and down the track is a simple matter, but a bind or problem will always develop on the side of the loco that is not visible or accessible, and it will always stop out of the reach of the controller.

This is no longer the case for the loco tester, or 'Rolling Road', is here. This style of product is not new, for one sample has been available in the USA for many years, at a rather high price. The H&M unit is not too expensive and it is very handy.

The loco tester comprises a section of timber which is part recessed on one end. A section of track (code 100) is laid along the top of the timber and down into the recess. A length of cable is supplied to connect the track to a controller. The sides of the recessed section are padded with foam rubber and fitted between the rubber are five sets of rollers.

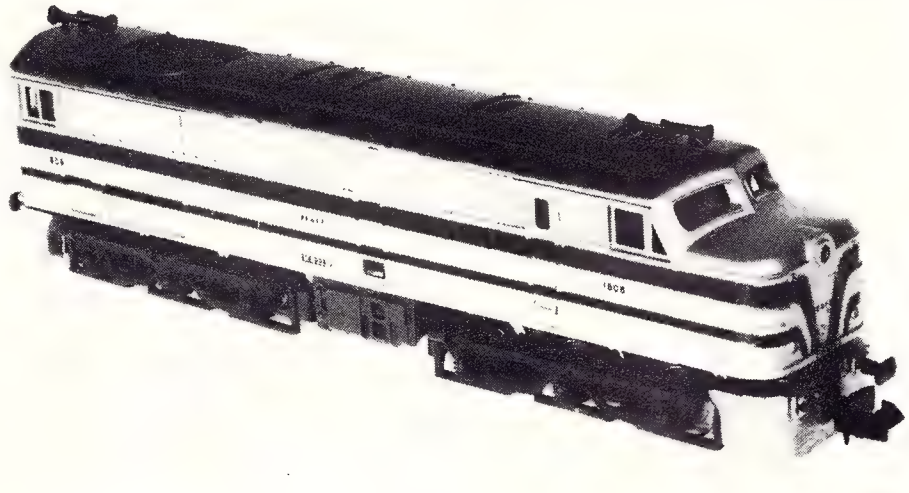
The rollers comprise a 'U' shaped metal bracket fitted with split rollers (brass and nylon) which float to attain the correct wheel gauge. Power is picked up by the brass rollers via the roller axle and the metal bracket which makes contact with the track.

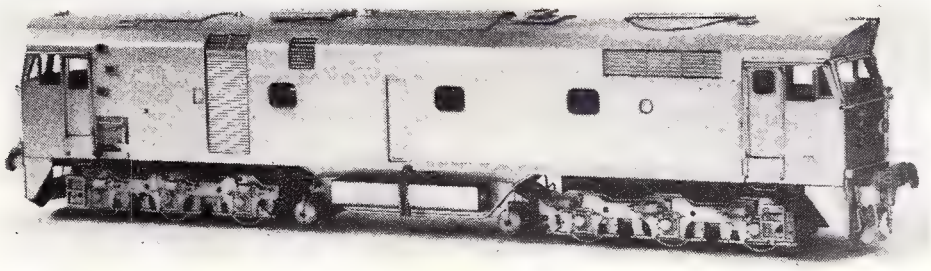
To test a loco all that is required is to place the driving section of the loco on the rollers, the brass rollers to the 'pick-up' side of the drive unit and the undriven section on the flat section of track. Connect the leads to the controller and the track and apply the power, and if the correct placement of the rollers has been attained the model will roll.

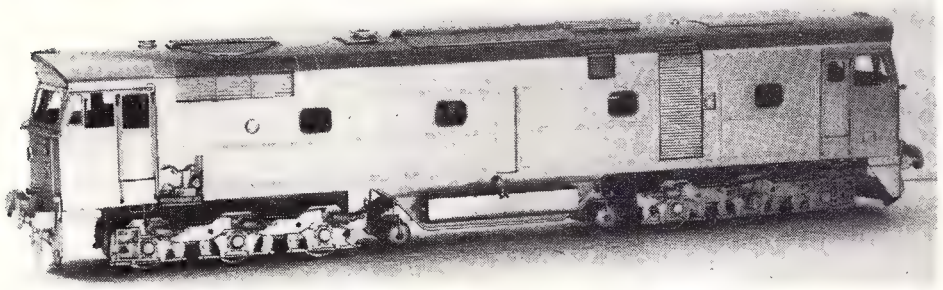
One side of the roller frame is insulated, which enables a number of different types of locos to be used including tank locos, tender drive, loco drive, BO-BO-diesel, and single (end) drive diesels. Co-Co drive diesels and articulated locos can be tested, but with a little difficulty. If an extra roller section was available it would be possible to run all Co-Co diesels, although one set of wheels can be left to float.

Once set up a loco can be run fast or slow, continuous or in short bursts. The track can be spun around so that any part of the loco can be inspected or checked. A very handy instrument.

Bob Gallagher.







HO Scale NSWR 442 Class locomotive, by Samhonga (South Korea). Imported by Mansfield Hobbies, 100 Pacific Highway, Waitara 2077. Price: $245.00.

The prototype entered service with the NSWR in October 1970, being a product of A. E. Goodwin, the then Alco franchise holder. In all, 40 units were produced, the last six have an AC electrical system as opposed to the DC system of the earlier units. A prototype, plan and scratch building article appeared in the November/December issue of AMRM.

The model is one of the first 15 units of the class due to the position of the piping to the air tanks but this could easily be altered by referring to the photos in the November/December AMRM. The construction method is etched brass sheet with the addition by soldering of further etchings, stampings and lost wax castings. The quality of these components is quite adequate with the possible exception of the air horns. However, the manner in which they are assembled leaves a little to be desired.

I studied three models in order to make a fair assessment and all had excess solder in at least two places; however, not so excessive as to require major rework. The ends of the model where the recess for the air horns are has gaps in the construction which will require rectifying before painting, otherwise the painting will magnify the problem. Further, the folding of the main brass etching to form the body sides and roof has resulted in a slightly rounded effect to the normally angular roof cross-section.

A number of components were misaligned in the soldering assembly. This was particularly noticeable with the buffing plates. This is a shame as the sprung buffing system is a logical development of the sprung buffers of the 43 class and it works quite well, although some experimenting on coupler position will be necessary to prevent buffer lock in reverse running if any modeller wants to in fact 'use' the buffing plate, but I would recommend modellers licence and have just a little air space.

One point which was immediately obvious was the inclusion in the staff exchanger recess of a multiple unit socket. This could be removed and I ask "was it on the pilot?" I can see how it got there as the plan in AMRM, and I would think the plan used by Samhonga, has a 'something' in that position which, if in fact 'anything', should be a light. (See photo p34 November/December 1980, for correct appearance.) Keep the sockets as they could be used on an 80 class.

The mechanism is a can motor with flywheels driving through a double turret gear system to cast axle boxes with two of the three axles driven. The resulting running qualities of the units tested were excellent. The motor does cause interference with TV if operated too close to same, and promoters working with Samhonga should look at this, but if your layout is 30 feet or so away you should have minimal problems. The units ran smoothly and had very good slow running characteristics using a Locomotion Throttle. Acceleration is smooth and realistic and top speed is also realistic. It may be slow to scale but I did not measure it since as we do not use scale distances on our layouts, it becomes a matter of "does it look realistic working through that section?"

The one point that was measured was the hauling capacity. This was done along prototypical lines in that the load is expressed as that which the locomotive can start from stop on a 2½% grade situated on a 30 inch radius curve. The load lifted under these circumstances was six brass FO cars, one brass PHG van and three Protype bogie freight wagons. When converted to plastic bodied cars with good bogies this is more than a reasonably prototype load and longer than the crossing loops on most layouts. Dimensions are well within acceptable tolerances.

In summary the model looks like a Jumbo and works like one as well. It has its faults but they are not major. We must always strive for excellence, particularly when it is just a matter of squareness as assembly but you only get what you pay for. A good model that will give a lot of enjoyment to its owner.

Phil Collins.

Railway Prints and posters. Samples supplied by Locomotion Products (the importers) 14 Jennifer Crescent, Thirroul 2515. Price range: $1.10 to $3.30.

Posters are used to advise or advertise. People use them to their best advantage and many use posters to adorn walls. They can be expressive and decorative and only the individual can appreciate the glory a poster can portray.

The samples under review are from the British Rail (advertising) range as well as the leading British Poster Publishing Co. The BR range includes the Silver Jubilee poster and the 'Flying Scotsman' poster, and others in colour display the varying and differing scenes of railways including steam, diesel and even the High Speed Train. Others include traction posters in black and white and trams in sepia.

The posters are finely printed, and although some grain from 'blow-ups', is evident, the reproduction is good. See your local Locomotion dealers for the full range details.

Bob Gallagher.

NSWR 'MLE' kit in HO scale by Rails North Models. Sample supplied by Casula Hobbies, Phoenix Arcade, Macquarie St, Liverpool 2170. Price: $7.90.

The 'MLE', as a 45' flat wagon, was introduced to the NSWGR in 1943 when an order of 1000 units (Nos 24350-24449) from Tulloch's, Sydney, entered service. A further 25 units (Nos 25650-25674) were built by Tulloch's in 1947-48 and during the 1949 to 1952 period Goninan Engineering delivered a further 200 45' flat wagons (Nos 26275-26524) of which 78 were 'MLE's, the remainder being coded 'UME'. The difference between the classes was the four (deck) bolsters carried on the 'MLE' wagon not being added to the 'UME'.

Prior to this rehabilitation (post World War II) period a number of 40' flat wagons entered service as 'E' wagons and (some) were lengthened to 45' and upgraded to 'MLE' or 'UME' wagons and coded as such, or totally withdrawn from revenue service. This appeared to happen in the 1937 to 1942 period. It is interesting to note that the Railway Department used many 40' 'E' wagons as a base for the long 'water jin' which was used to help break many droughts in Western New South Wales.

The 'MLE' is a 45' long, 9'1⅝" wide (and the deck is 4' above the rails) flat wagon, fitted with four deck bolsters, which in turn are fitted with two metal stanchions (each). They have a tare weight of 20 tons and have a capacity of 41 tons (41.6 tonnes) and were recoded to NLFA in the 1980 recoding programme. Originally they were fitted with archbar bogies but these were replaced with the Andrews style of bogie (plain bearing) which became the standard bogie for the 45' flat wagon. Modification programmes and maintenance has seen the Bettendorf style of bogie in use on many of the present day wagons. In 1970 there were 139 wagons in service but only 42 in mid 1980. The model was based on No 24356.

As supplied, in a poly bag with a simple card top, the parts for the kit have been made from the 'vacuum epoxy' method, and the individual components are well formed, free of casting defects and are flat and square. There is evidence of flash which needs to be carefully cut and/or filed away, for the individual components are of scale size and as such are quite fragile and will break off if excess pressure is applied. A sheet of brief assembly hints and a well detailed diagram accompanies the kit.

The wagons were used for general traffic, but because of the bolsters saw special service with long pole, timber and some of the lighter steel traffic. They were painted in the standard grey (gunmetal grey) but the timber deck could be seen in various shades of weathering, for use of the wagon saw continual repairs to the planks on the deck. A section of 3-4 new planks on an old oily deck was not unusual. The coding and road number were on the solebar.

The kit comprises a base, deck, two headstocks, four bolsters and wire for stanchions, brake cylinder and receiver, brake handles (4), slide bar assembly and associated wire to complete the brake and load compensating levers.

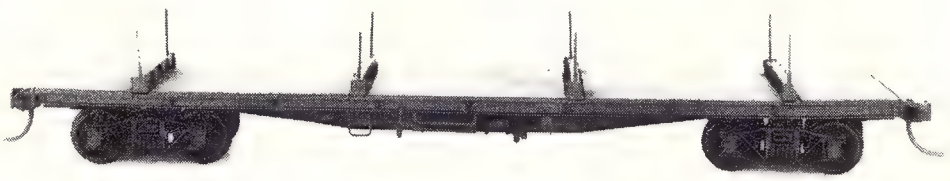
All components are well formed, and after the flash has been removed a high quality (in detail) kit is evident. The flash on the deck bolsters has to be filed down to provide the correct height. Assembly was very straightforward, although the 'assembly hints' were misleading and aimed only at the experienced modeller (with plenty of kit assembly experience) which is disappointing for this kit is so easy to assemble that it could readily be recommended for the careful beginner, if the instructions for assembly were accordingly written.

The kit was assembled virtually in reverse to the instructions, the recommended Roundhouse Bettendorf bogies being added after removal of flash. These were attached with 7 BA screws (drill No 48 and tap), the wood screws supplied being inadequate for they split the epoxy as they were tightened. The height of the wagon was correct using the Roundhouse Bettendorf bogies and 33" wheels. The couplers (Kadee No 5) were then added (with 10 BA screws) and all sections of screws above to the top of the underframe removed. (Allow for the end stock thickness when adding the couplers.) All other holes were then drilled using a No 79 drill (not the recommended No 76, for it was found to be too large for some of the fine sections, and the wire supplied is small enough to pass through a No 79 hole.) When drilling the load compensation and brake handle brackets there is a need to support, from the rear, these thin section parts.

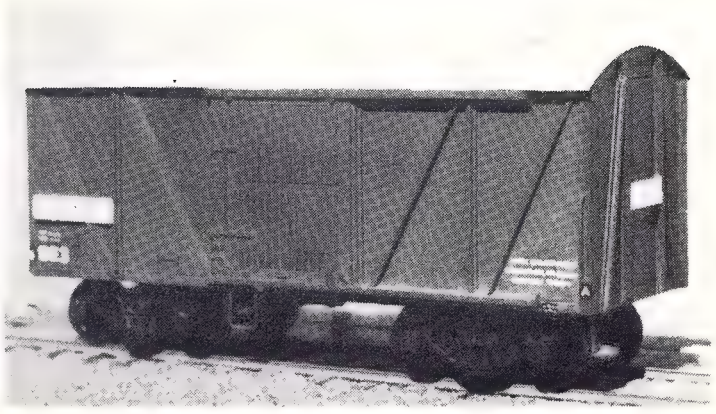
Repco Woodhill super glue was used to assemble the model in the sequence, deck to underframe (trim any overhang), end stock, underframe detail and finally deck bolsters and stanchions. Total assembly time 2 hours. Assembled the overall dimensions are correct.

A first on the market by Rails North and apart from the instructions a superb beginning.

Bob Gallagher.



BGB SAR 'OF'/'OBF' open wagon



BGB SAR 'SE' explosive van

BGB South Australian Railways broad gauge OF or OBF 4 wheel open wagon kit. Model supplied by the manufacturer. Price: $4.50.

This is a model of the SAR equivalent to the NSWGR K and VR GY wagons. Dimensionally the OBF came out six scale inches short, three inches wide and about the right height. Cast on detail is still basic but comes up nicely under a coat of paint. Like the OB reviewed earlier the end stamped panels are not correct. The bottom edge of the depressed area is too high and this upsets the correct positioning of the end handrails. It is proportional errors such as this that affects a model's appearance more than basic errors such as length or ill-formed detail. The coping at the ends of the sides was broken or had an airbubble in it in three of the four corners in the model reviewed. I filled the gaps with epoxy Panel Fix and filed to shape.

I used the recommended Peco wheel assemblies from their underframe kit. It is not stated on the packaging that this is a requirement. Installed as directed the Peco axlebox assemblies come out passably close to 3.5mm scale.

As instruction sheets go for Australian kits BGB's are good, though the photographs for this kit have still reproduced to a poor standard. The diagrams are not a great deal better and can be confusing. I modelled the tarpaulin tie-down rail by following photographs from my file as I could make no sense of the diagram.

I painted my model with Floquil SP Lark Dark Grey, to represent the SAR pre-1960 colour. All below the solebar was painted Grimy Black. After the review photograph has been taken I will fit the tarpaulin and Kadee couplers.

Overall these are pleasing models and with their ease of assembly could satisfactorily be built by even those with little kit experience. Taken in all, these are recommended as a good buy.

Ross Hurley.

BGB SAR SE Bogie Explosives Van. Model supplied by the manufacturer. Price $5.85.

A description of these vans appeared in the July/Aug 1979 issue of AMRM. They are a bogie exchange vehicle used for explosives traffic between Melbourne and Broken Hill, via Adelaide.

This model appears to herald a new breed of BGB kits. The detail is much improved on earlier models, being sharp, clear and accurately formed. Particularly good is the tee strapping on the sides and ends which was perfectly cast. A small section of the review kit was found broken on opening, however. It was retrieved from the packaging and secured with superglue. I suspect this could become a handling problem during transport. A good attempt was made on pre-drilled handrail holes, though they were provided on all four corners instead of only two, and were not provided for the stirrup steps below the doors.

Dimensionally the model is within acceptable limits. The length and width were three scale inches over the dimensions recorded on the 1979 drawing. The vertical bracing on the ends did not accord with the drawing. They were too thin and too far apart and this changed the angle of the diagonal bracing considerably.

The instructions still have not very helpful photographs and diagrams. The text also needs to be trap tested for beginners' bugs. It is the one area where BGB's productions lack professionalism and could cause problems for those unfamiliar with, and without access to, the prototype.

I painted the body of my model with a lightly faded Floquil Tuscan Red and the roof with a slightly dirtied Humbrol flat white.

I've always recommended BGB kits in the past. This one gets a high recommendation.

Ross Hurley.

GM class diesel electric locomotive of the ANR in HO scale by Lima. Sample supplied by St George Hobbies, 504 Rocky Point Road, Sans Souci 2219. Price: $41.25.

The GM12 series of diesels was an extension by the then Commonwealth Railways of the GM class which had been introduced to service in September 1951. The new order from Clyde Engineering saw the existing GM class upgraded to Co-Co drive, a V16 power plant developing 1750 HP at 835 rpm and a top speed of 134 km/h although the 'F' style of cab appearance was retained. This latter class of diesel was used by the NSWR (42 class) and the Victorian Railways (S class). In all there are 37 units in the GM12 class numbered GM12 to GM47, although the last 11 had a different roof profile housing dynamic braking equipment. GM12 was put into service in 1955 and GM47 in 1967. The GM12 class was covered in the March/April 1978 issue of AMRM.

The model under review is the Lima VR 'S' class repainted to GM32. The model has the right profile and correct overall dimensions for a GM12 series but it does have some detail the class does not carry and some items are not in the correct places. The model is painted in the maroon and silver of the Commonwealth Railways/Australian National Railways and is lettered for ANR 32, a style that was commenced in the 1974-75 period. All paint and trim work has been neatly applied and the colour shading is acceptable.

The model is powered by a ringfield motor which drives two axles via spur gears. Pick up is via both bogies and a cab light is provided. Wheels are steel 10.5 mm diameter and two drive wheels have plastic traction tyres fitted. The wheels have NEM standard flanges (1.3 mm deep) and the standard Lima coupler is fitted to the bogies, as is the skirt for the cab end of the loco.

Traction is aided by a lump of lead in the fuel tank, and there is a space for more. Tractive effort is surprising, better than often expected by this style of single bogie drive, and quite able to haul six IP/TAM coaches up a 30:1 grade. The unit tracks well and while it has a good turn of speed, it responds well to the common style of transistor controller, and is capable of smooth, slow speed.

The body clips onto the chassis and the 'glass' section slips freely inside the body. The sample reviewed had only one exhaust stack but it was a sample from the first run, the latter produced models having the more correct two exhaust outlets. This is a fine model, although it is a repaint. It would be acceptable to many modellers who are not too particular upon the accuracy of the model. It does look like a GM12 diesel.

For those who are particular and desire accurate models the following lists some of the obvious deficiencies that could be corrected, but then a good paint job would also be damaged. The five horn cluster should be on the nose and not on the roof; one roof fan is incorrectly placed at the rear of the unit instead of the front; neither staff exchange pocket should be on the unit; the rear side and end windows should not be evident, although the round cab door portal should be there, and is; a large section of the side metal gauze should not be evident and there should be a ladder at the undriven end of the loco (normally the No. 2 cab end, but the GM12 series only had one cab, at the front).

Bob Gallagher.

Signs for HO scale railways by Creative Screen Process. Samples supplied by Mail Order Models, 14/29 'Marsden' Great Western Highway, Parramatta 2150. Price: $2.20 a set.

Signs have become an important part of modern lifestyle, whether we like it or not. Railways and highways are littered with signs that instruct and/or direct. These sets of signs will help the modeller detail the 'railway' and the 'roadway' scenically, giving a more realistic scene. The signs are supplied two to a pack and are each 36 mm wide, 100 mm long and are printed on gloss 0.3 mm card, which is readily trimmed with a sharp knife without any 'fluffing' on the edges.

The specific signs are:—

- Street & Highway No. 1 — 110 signs which include street names (American... First, Second, etc) in black and white, detour and road closed signs (black on orange) and the seemingly standard sign for a slippery road (black on yellow).
- Street & Highway No. 2 — 56 signs which include 32 'No Parking' signs (red on white) for almost everywhere one should not park and (black on yellow) road/highway safety signs including cross roads, T-intersection, S-bend, etc.
- Street & Highway No. 3 — 72 signs including 48 direction type signs (black on white) that can be found around a city or town, 12 stop signs (white on red) and 12 round black on yellow railway crossing signs.
- Railroad Track No. 3 — 86 signs which include speed (black on yellow) diamond signs, railroad crossing 'crosses' etc, etc.

All samples reviewed were well printed and colour location was good. The signs seemed to be the correct size, but as there were so many of them, and time for reviewing limited, we did not check all for actual correctness, but they look right.

Bob Gallagher.

NEW ZEALAND RAILWAYS DIESELS by E. J. McClare, published by Southern Press. Copy supplied by Mail Order Models, 14/29 Great Western Highway, Parramatta 2150. Price: $5.00.

This 64-page 210 mm + 148 mm; hard cover booklet is a short coverage of the diesel locomotives in use on the New Zealand Railways 3'6" system in 1980. Each class is covered by a brief history and description of the locomotive class history and duties. A list of technical details accompanies the

description which is also accompanied by static and working photographs.

The paper used is quality gloss and the black and white photographs have been reproduced without too many imperfections. The front cover is a coloured photograph of DF 1651, in modern livery and showing both its old (1615) and new (6006) numbers.

A fine little publication that would be a good guide for the modeller interested in the NZR or for the tourist venturing to the Shaky Isles on holidays and aiming at a bit of train spotting.

Bob Gallagher.

VR 'V' louvre van kit in HO scale by Broad Gauge Bodies. Price: $5.95.

The Victorian Railways in 1925 purchased two vans for evaluation purposes and with modifications they became the basis for a large class of louvre vans used for general service on the broad gauge in Victoria, and no doubt filtering over into South Australia.

The 'V' class, the original style built by the American Car and Foundry Ltd, and more built at Newport in 1927-28, is a 33 ton 36ft van with a single sliding door each side. Identifying marks are on the bottom two louvres and in 1975 they were fitted with plain bearing bogies, similar to bettendorf pattern.

In 1978 all 'V' vans had been upgraded to 'VF' and were fitted with ride-control roller bearing bogies. A white square (with the letter 'F' inserted) is placed on the top right hand corner of the sides and the top left hand corner of the ends for identification.

The kit, consists of sides, ends and floor (from polyester castings), curved aluminium and corrugated card for the roof, timber centre sill plus brass wire and brass for underfloor detail. While clear decal film is supplied to produce identifying marks, bogies and couplers are not supplied.

The usual detailed assembly sheets, which include diagrams and photograph illustrations, accompany the kit, and could guide the novice in assembly to a good standard. Much has been written on the quality of BGB kits and this kit is no different.

Detail is fine, flash slight and readily removed, components free of holes as well as being square and flat. The only problem found with this kit was that (in some instances) the sides are not the correct height and modellers have to choose between moving the sides up to meet the roof or to file the roof profile of the ends down to meet the sides, to avoid a gap between the sides and the roof.

Walther's 0.013 brass wire was used for grab irons in place of the wire supplied (drill No 79) and 3" x 1" styrene strips used as boards on the corrugated roof. The assembled kit accepts Kadee No 5 couplers, and Roundhouse bogies attached with 7 BA screws is ideal.

Another fine model from the Broad Gauge Bodies stable. Ideal for the novice and the VR prototype operator alike.

Bob Gallagher.

VR 'V' and 'VF' four door louvre van kit by Broad Gauge Bodies, who supplied the sample. Price: $5.95.

The four door version of the 'V'/'VF' louvre van is identical to the two door version, excepting the number of sliding doors. Capacity and dimensions remained the same.

In essence the kit is identical to the two door version.

The instruction leaflets supply all relevant detail and assembly hints to allow the modeller (especially the novice) to complete a fine model. A good sister model to the two door version, the same problems in assembly were found and can be similarly corrected.

Another fine model from BGB.

Bob Gallagher.

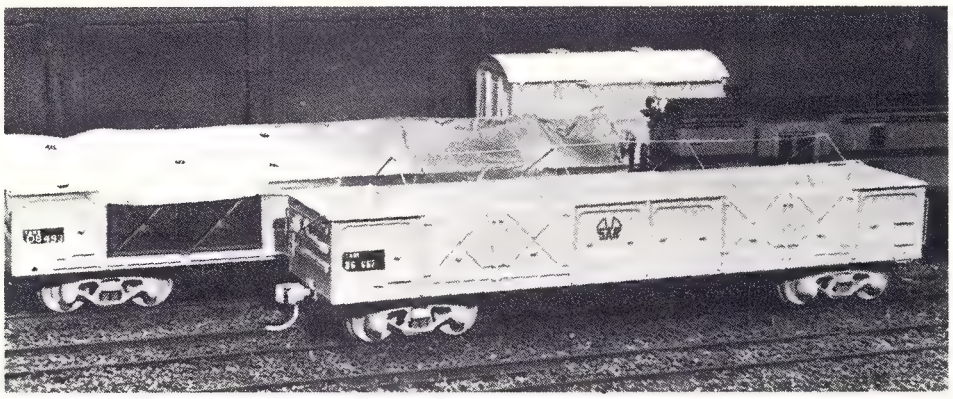
VR 'VP' louvre van kit by Broad Gauge Bodies, who supplied the review sample. Price: $6.25.

The 'VP' louvre van was built at Newport workshops during 1955-56, as a four door, forty foot, thirty five tonne louvre van and is fitted with passenger bogies. There were 50 vans built, numbered 100-149. A lettering and marking board is fitted to all vans with grade control. The vans are used on passenger trains and can be seen on the standard gauge behind (or in front of) the three named trains between Sydney and Melbourne.

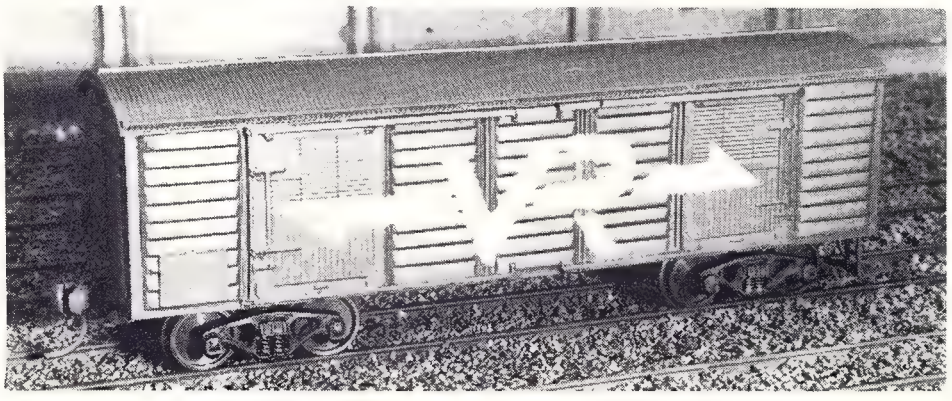
The kit is essentially a larger version of the 'V'/'VF' kits and the same accolades and disappointments occur. The slight problem in assembly can be overcome as detailed in the review of the two door 'V'/'VF'. Again 0.013" brass wire was used for grab irons and 3" x 1" styrene strip used for the four timber strips on the roof. Kadee No 5 couplers were used and Athearn express reefer bogies are ideal for the correct bogie.

A superb model that is ideal for the modern NSW modeller as well as the VR and SAR followers.

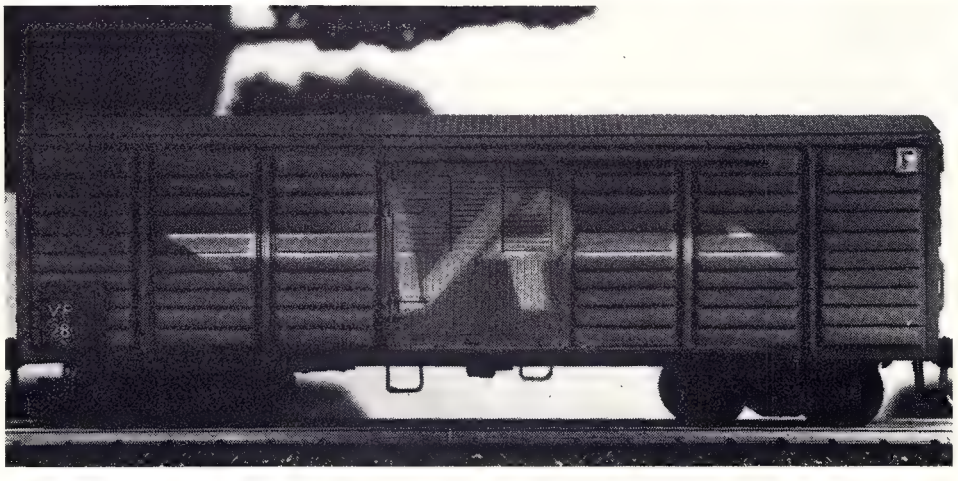
Bob Gallagher.



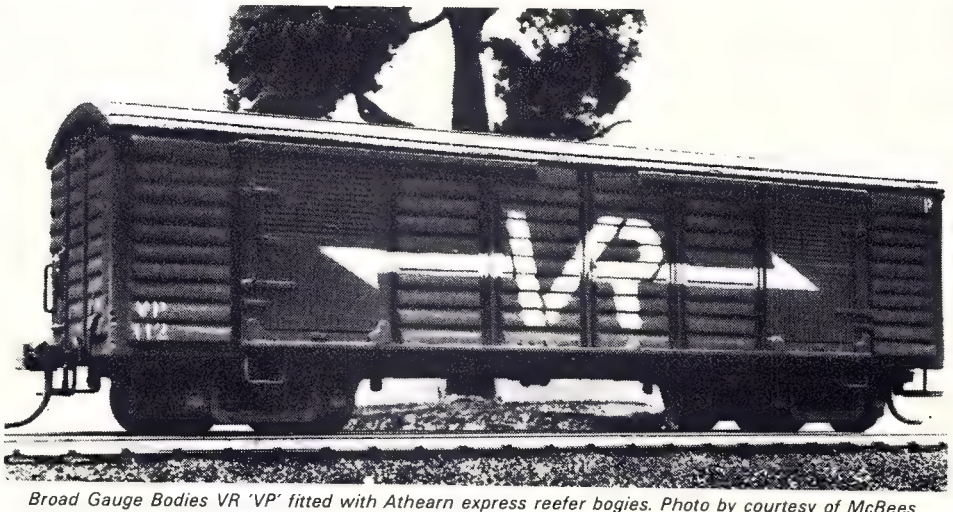
SAR 'OB' tiedown variation (reviewed last issue) by BGB, detailed as an open 'OG' with tarp supports in place. Graham Ball modeller and photographer.



Four door VR 'V/VF' fitted with coded board and decalled with M n' J decal.



Two door version of BGB 'V/VF' kit, detailed as 'VF 28'. Photograph by courtesy of McBees Hobbies.



Broad Gauge Bodies VR 'VP' fitted with Athearn express reefer bogies. Photo by courtesy of McBees Hobbies.

NSWR 'HGM/HGX' open wagon kit in HO scale by Rails North Models. Sample supplied by Casula Hobbies, Phoenix Arcade, Macquarie St, Liverpool 2170. Price: $8.90.

The 'G' wagon, a 40' long 9'6" wide wagon with 4'3" high sides, was a general traffic wagon built in

the post war rehabilitation. The feature of the wagon is that it had 16 floor discharge doors which were opened via a handwheel at the end of the wagon. The sides had two sets of 8'11" double opening doors each side. There were 500 'G' wagons built by Waggonfabrik Talbot in Aachen, West Germany and assembled in Australia by Clyde Engineering in 1951. They were issued various road numbers.

As introduced they were painted gunmetal grey and were fitted with plain bearing Bettendorf bogies. Later, the higher capacity roller bearing Bettendorf bogie and the Top-hang clasp bogie were fitted to various wagons. As introduced they had a carrying capacity of 20 tons.

Over the years various improvements and modifications were applied to the 'G' class of wagons to a point where, in 1970, there were eight different types of 'G' wagons, each with its own special code, although the 'G' prefix was maintained. The Basic 'G' wagon eventually disappeared from the scene in 1977.

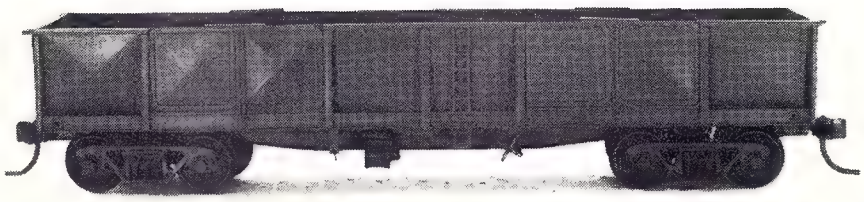
The HGM wagon maintained the sides and side doors, but the floor doors have been removed and replaced with a steel floor, or at least had the floor doors welded and sealed. They were fitted with the heavier capacity roller bearing Bettendorf bogie, and rated to carry 50 tons.

The HGX version is identical to the HGM except that it is fitted for bogie exchange, and can be seen with either red VR Bettendorf bogies of the grey shaded version from South Australia, as well as the black/grey NSW type.

In 1970 the numbers of the 'G' class had diminished through wear and tear and recording. Numbers were:— 'G'-28; GCX-3; GM-95; GX-28; GH-31; HGM-144; HGX-27 and GP-130, a total of 486 units in service.

In 1980 the numbers were:— G-nil; GCX-2; GM-4; GX-1; GH-1; HGM-240; HGX-51 and GP-132 (a total of 431). Note that most of the other codes diminished to build up the HGM class.

HGM wagons were recoded NOGF (with GH wagons) in 1980 while the HGX was recoded NOGX (with the GX and GCX wagons). Road numbers for the HGM/HGX are mainly four digits but very few if any are running numbers, for when issued to traffic they



were issued 'spare' numbers (which had been vacated by the disposal of other goods wagons) and not the block numbering which was being applied prior to the introduction of the 'G' wagon.

As supplied the kit comes in a poly bag with simple card top. Included in the kit are all the components (except bogies, couplers, paint and decals) to allow the modeller to build or assemble a well detailed model. All components have been formed from epoxy moulds, and the detail on most components is meticulous, especially the sides and ends which have inside and outside detail. The dreadnought pressed end is not quite correct, it lacking the curvatures on the peaks of the pressing, but this does not detract from the overall quality.

The main body components have a little flash which is easily cleaned off with a second cut file. It is not necessary, but a better model will be produced if the top ridge and ends of the sides are dressed with a file. The detail components, especially the brake wheel, are heavily flashed and need careful attention when cleaning. The hand brake wheel is too close to correct size and the hole (to be drilled) too big to allow two clean castings to be separated from the four supplied. Use a No 79 or 80 drill (instead of No 76) and a lot of care.

There is a problem with the kit (at least the first run) that can be overcome easily with an organised assembly procedure, the problem being an error with the coupler pocket height and the wagon height. If normal assembly is followed one must be wrong.

The suggested assembly procedure is to attach the bogies (Roundhouse Bettendorf or triple roller bearing fitted with Kadee 36" wheels) to the floor/underframe with 7 BA screws and place aside. Then assemble the sides and ends together (securing with ACC glue — Repco Woodhill is recommended) and when ready sit the body onto the underframe (do not glue yet). Adjust the wagon to the correct 8'6⅝" (30mm) above rail height by filing down the two lugs that form the body bolster. Do not be too hasty and take small passes of the file until the correct height has been attained. When complete adjust the coupler pocket (on the underside of the floor section) until it is 11.5mm above rail height.

The body can then be secured to the floor, the couplers (Kadee No 5) added with 10 BA screws and the underfloor detail added. The lugs for grade control and brake gear must be added to the lower edge of the sides. Assembled, the wagon is correct in overall dimensions.

The instruction sheet which accompanies the kit is only aimed at the experienced modeller which is astounding, for the design of the kit (with explicit instructions) is well within the means of the novice kit builder, and apart from the underframe detail (which can be fiddly) could be recommended to the raw beginner.

The wagon is a superb addition to the Australian market (the HGX version can run all over Australia on the standard and broad gauge) and a model which can be painted in any of the NSW railway system colours, especially the blue and the new red.

Bob Gallagher.

MAIL BAG

Sir,

Through your columns could we ask that you advise readers that a Model Railway Club has been formed in the South East of South Australia based on Mt Gambier and called the Blue Lake Model Railway Club.

Since formation in December 1980 the Club has arranged a visit to the Geelong exhibition and staged an exhibition of our own in Mt Gambier. Because of prior commitments a proposed visit to the Camberwell exhibition could not be arranged this year but several members indicated that they would start next year.

Difficulty has been experienced in finding suitable premises at a rent we can afford but by the time this appears in print we hope that this problem will have been overcome.

All members of the group model in HO Scale but this is no bar to modellers in other scales who wish to join.

Until premises are found it is intended to hold clinics and arrange excursions. Meetings are at present held approximately monthly and varying locations usually on a Sunday night and information on date and venue can be obtained from me (Telephone 087-372207 AH 372239) or the President Mr Ian Gabell (Telephone 087-255923 AH 252984).

A. W. Balnaves
Penola 5277

Sir,

I would just like to thank all the modellers who supported me by coming to the first model railway exhibition held at St Anthony's school fete at Picton in March. It was pleasing to see so many who had travelled long distances to the exhibition. I hope they all had an enjoyable day.

James Whitfield,
Tahmoor 2573.

Sir,

I find it quite an anomaly that I can purchase 2AT and 2AE type bogies (HO scale), each type from at least two manufacturers, but not the ubiquitous 2CM type.

I'm sure other modellers following PTC/SRA practice in the 70's onwards feel frustrated in not being able to include on their rosters 2CM equipped wagons. There are thousands of 2CM equipped wagons on the system at present and many more being constructed, such types as CHY, CDY, BDY, WTY, OCY, KLY, and JLY wagons. These types of wagons often make up large proportions of freight trains or solid block trains, ie WTY, CHY types.

On the market now is Berg's OCY kit needing 2CM bogies to complement it; BDX, KLX, JLX types from Friedmont; 2CM bogies alter the codes to BDY (near enough), KLY and JLY. The Australian MODEL RAILWAY Magazine some months back published a Prototype Plan of the CDY open bogie wagon, easily scratchbuilt, but what is the point in building half a vehicle.

If 2AE and 2AT type bogies are a marketable proposition then so is the 2CM type. The omission of this type bogie from the market is a grand oversight.

Also on the subject of bogies, how about some 2CA or 2BS types for not all PTC/SRA passenger vehicles run on 2AN, 3AG or 2AA.

Alex Cairns,
Redland Bay 4165.

It is becoming a practice with present day NSW railway (HO) kit manufacturers to include the correct bogies with the kit. Rails North Models is producing a KLY kit which will include the 2CM type bogie, and maybe (if there is sufficient demand) they will be released separately. (Ed)

Sir,

I have just bought the new Lima HO 'TAM' and 'MBE' passenger cars. Both models are excellent, there being no flash on the model and the 'TAM' at least measures up very well when compared to the plans in the March/April 1977 issue of AMRM.

One question though: at what stage(s) were the crownlights removed from the (entire) class? This is relevant as I am modelling 1955-1970 period. Also, were the crownlights removed before the flat panels replaced the timber sides, or after?

P. B. Grant,
West Pymble 2073.

The actual modification of the 'TAM' cars took place over a long period, which is mentioned in most of the publications on NSWR passenger cars, although the actual date each car was modified has not been published. Generally, the flat (Masonite) covering was secured over the existing panelling and over the crownlights at the same time. (Ed)

Sir,

I would like to suggest the following as a future article in the magazine. In many articles on model building the directions state ". . . glue together . . ." and/or ". . . then paint . . .". I have heard many views on what adhesives and paints to use and not to use. As such, could an article (or articles) be prepared on the various types of adhesives in order to assist readers and/or modellers, including myself.

Also, your article dealing with detailing a C35 class white metal kit (March/April 1981 issue) is most interesting. Could consideration be given to articles dealing with detailing of other white metal kits and the correcting of faults in detailing of brass models (in particular NSW models).

G. W. Bolton,
Asquith 2078.

Most modellers have their own favourite glue and their own method of painting, and for this reason many authors do not go into any real depth on these quite essential subjects. Hopefully in the future individual readers will write articles dealing with the subjects mentioned by Mr G. W. Bolton. (Ed)

Sir,

Congratulations of a high order due to you and staff on the production of the January/February 1981 issue.

Why?

The coloured photos of locos — thank you.

From photos like this we are able to determine not so much the correct colours but much more importantly where the various colours begin and end. This is borne out on page 33, see 44222.

N. Dickie,
Woonona NSW.

Sir,

Having just attended the AMRA exhibition in Melbourne reminded me that I had seen little

comment on the 1980 October show in Sydney. I thought it was very good and all who organised and participated in it should be congratulated. I thought there was a good variety of layouts and stands which were well laid out and lit. 'BYLONG' and 'HAWKESBURY RIVER' were very good. A couple of layouts appeared to move from crisis to real drama at all times, but these seemed to equal out the range and give hope to the duffers like myself! 'WELLS STREET' was original and the traffic density amazing. A notorious moment arrived while I was watching when a C32 class on a country passenger tripped over a set of points and hit the ballast; with a pair of electric suburbans approaching at high speed, the spectators held their breath. Suddenly the large five fingered sky hook appeared and the offending engine was removed! But overall well done, and I thought it was well worth the trip to Sydney.

As for the recent Melbourne show, well we can only look forward to next year. The commercial stands were very good as was the ARHS film show, but what of the layouts? With a couple of exceptions they just did not seem to make the grade and this year there was no 'WOODEND' to make up for the low standard. There are probably good reasons for this poor show, but nonetheless anyone interested in a bit more than odd collections of locos and rolling stock charging around would have been disappointed. This does not mean I won't go back next year. Having worked in a number of shows in Brisbane I know what can go wrong, but I hope it's better next time.

Well done with the magazine. The cover reminded me that one day I may catch up with and view 'MENANGLE'. Melbourne sure needed a layout like it this year.

Roger Kershaw,
Puckapunyal 3662.

Sir,

I have just received and finished reading the November/December '80 issue of your magazine and was delighted to see the return of Len Oberg's column "Photographically Speaking". The column was missed the past few issues; and the cause I was afraid, was a lack of interest for Len's writings, or that the column was perceived as not suiting the magazine's format. Mr Oberg's ability to find topics and discuss the finer points of railroad photography has taught me techniques that have greatly enhanced my picture taking. Fine prototype modelling and the ability to record the prototype on film are compatible and belong in your excellent magazine.

The quality of AUSTRALIAN MODEL RAILWAY MAGAZINE continues to develop with every issue. The decision to pursue a content of "modelling Australian prototype" was correct and truly reflects and helps generate increased interest by Australians in their own unique brand of railroading. The future of the hobby lies ahead in the challenge of building models that reflect the "feel" of real life railroading and its surroundings. The appearance of similar magazines like MAINLINE MODELER, THE GAZETTE, and numerous prototype technical societies reflect that interest by the modelling populance. At the same time the stereotyped "grown up playing with toy trains" image is being vanquished.

The popularity of Australian prototype modelling is directly related to the quality of the kits, parts, engines, cars' decals, etc. that the modeller is able to purchase. It is refreshing to read your product reviews where your are not only positive, but critical as well. A product review should inform the reader as to shortcomings and recommended corrective measures; not be a rehash of the manufacturers' hype. Your reviews appear to be fostering the growth of quality Australian prototype models thereby keeping the junk out of the market. Here in North America, where the "Model Railroading is Fun" mag has such an undue influence, we are constantly having toyish crap foisted upon us because a lack of constructive criticism has left our standards up to the determination of the manufacturers.

I have enjoyed reading your magazine since 1977 and after each issue I find myself enthused, motivated, and at least thinking about modelling some of my favourite WAGR and SAR pieces of equipment.

Richard Yaremko,
Calgary, Alberta, Canada.

Sir,

We were rather surprised and concerned to read Mr Tony Scott's comments re our 'Spirit of Progress' car in the March/April issue of the Australian MODEL RAILWAY Magazine, for Mr Scott has not contacted us about any of the components he considers of poor quality. As it is our policy not only to continually improve our products, but to replace defective parts to our kits. We are disappointed that Mr Scott chose to make public his complaint before we had the opportunity to rectify or replace any of the components.

We trust that this letter will be published so that AMRM readers, and our customers will be made aware of our policy and our aim to please modellers with a quality product.

Gerry Weight,
Weico Models,
PO Box 283,
Reservoir 3073.

Readers should always contact the manufacturer about a problem before making public their complaints, but by the same token, manufacturers should make public their postal address where the complaint may be sent. Ed.

Sir,

I would like to also add my support to Alan Harvey (Nov/Dec 1980) and P. M. Clark (Mar/April 1981) suggesting a regular section for the novice. I can understand the problems of repeating such an article but surely it would be an outline and guideline for the beginner.

Some of the problems I've so far encountered are:

i. Which scale to select,
ii. What is the difference between HO and OO,
iii. Which scale is easiest to work with and maintain,
iv. How do you wire up tracks, and how does Zero 1 or Salota multi-train controls work,
v. I notice from photographs in your magazine that a person can change the couplings to a more realistic coupling but have no idea what they are called or how to go about it.

These are but a few of the questions that I'm sure you have all asked yourselves and probably you've all made many mistakes. It would be nice to avoid some of the pitfalls. Most of the shops I've visited seem only interested in sales and not assisting in the selection of a scale that would suit further developments.

Thank you for a fine magazine. I read mine from cover to cover and then again and again, so please remember there are many of us only taking our first step into this hobby.

R. A. Christmas,
Maroochydore 4558.

We are acutely aware that there is a constant need to publish articles that will benefit the newcomer, and it would be pleasant to have a regular column on the subject, but to encompass everything a newcomer requires to know would fill each issue a few times over, and then no doubt something would be missed. Current AMRM policy is to publish articles that will allow all modellers, newcomer and old timer alike to benefit from them. We also have a few in the preparation stages that will show beginners how to achieve certain aims and objectives, but we must again point out that there are numerous books and booklets on the Australian market that handle many of the beginner subjects to a much greater depth than AMRM could ever aim for. We hope, in the near future, to include a column that will list these books so that the beginner can acquire them. (Ed)

Sir,

Further to the photo of my 80 class in issue 105, I wish to advise that I have not yet had the time to write an article or draw a plan. For those wishing to scratchbuild the 80 class, this model uses a Jouef chassis (French electric with almost correct bogie wheel centres) cut down to length to get the correct overall wheel centres. The sides were cut off the bogies and new sides built up in styrene, using old knitting needles for the air cylinders, etc.

The body was built up similar to the 442 class described in issue 105, only the driver's cabins at each end were fixed to the main chassis (don't forget toilet and roof vent on one end), and the body section between made removable. The glass areas were clear plastic and the raised section above the cabins allowed space for a small globe for the headlights working off switching diodes so that the headlight facing the direction of travel is on. One day I hope to fit a smoke generator to the exhaust.

Details were obtained from the large plan available from the SRA Archives and my own photos taken of 8011 while working on track maintenance at Springwood. In issue 106 (the coloured one), Casula Hobbies were advertising an 80 class body kit, (although I have not seen one) which may be worth while looking into to save some time.

Eddie Garde,
Blaxland 2774.

AMRM NEWS

A quick glance at the cover will advise the reader that the retail price of the Australian Model Railway Magazine has increased to $1.50. The cost of producing a magazine and trying to run an office is becoming more expensive each day, and so our prices must increase to keep our bank manager happy. Hopefully, readers will gain some other benefits from the increase, but these will only apply on an issue to issue basis.

Subscribers

With this issue we are doing a complete UP-DATE of our subscription computer listing and we ask any subscriber who is either having their copy sent to the wrong address, or is mistakingly receiving two or more copies to differing addresses, to notify our office immediately so that the records can be correctly adjusted. Anyone receiving two copies will have their records adjusted regardless, but it would be helpful to avoid putting the incorrect address back on the list.

With the computer system we can at times have an error occur without our staff being aware of the problem, unless the subscriber advises us accordingly.

Subscribers are once again warned that unless they get their renewal note and monies into our office by the correct date they are immediately removed from the list, even if they are a day late. We generally advise of renewal two months before the deadline so it is up to the subscriber.

Clubs

There has been a call recently for clubs to be listed within the pages of AMRM. Unfortunately we do not have the staff or the space to publish such a list every issue, but we will try to print a list of clubs once a year, in the September/October issue. To be listed, club secretaries will be required to send in (yearly) the club name, address of premises, Secretary's name, address and phone number and the club 'specialty'. Deadline is July 31, 1981.

It never rains but it . . .

Over the years those of us who have been in the Australian modelling side of the hobby have learnt to go without any commercial produced or promoted articles for very long periods. These droughts have at times been devastating, and at one stage there was not one active manufacturer or even a regular magazine to stimulate interest on the market. This was only seven or eight years ago, and so many of us learnt to survive by the barter or swap system, and most of us got to know the casual manufacturer very well for that was the only way to obtain a chance of purchasing the very limited run models.

The added interest in the past few years by new and old producers has seen this situation change to a point where the modeller/collector who tries to obtain at least one of each item produced has become a museum object, for the cost and the time to assemble and paint all the models is too prohibitive. This activity is good and, providing producers keep a clear prospective, augurs well for the hobby.

Despite this knowledge of high availability an eight day period in mid March 1981 say the release of nine sought after models (in Sydney). Starting on Friday 13th (unlucky for some) the Lima TAM, MBE, (VR) ELX, (SAR) ELX; The MRC VR 'AE' coach; the Stephen Johnson 'bogie water jin'; the ABL Models 'Baldwin' tender and the Rails North Models 'MLE' and 'HGM/HGX' came on the market, the rush of fine models being finished off with the arrival of Mansfield's 442 locomotive.

The period would have been more hectic if the other few manufacturers had been successful in meeting their original estimates. For the record the March/April 1981 issue only missed the eight day period by one day.

Reading Matter

George Allen & Unwin Australia Pty Ltd have released three books for the enthusiast.

STEAM 81 is a listing of railway preservation activities and minor railways in the British Isles, and any visitor to the UK would find this publication invaluable. Priced at $14.95 in paperback.

MAN OF THE SOUTHERN: Jim Evans Looks Back. Jim Evans, a Southern Railways employee (since 1944) and a lover of trains relates his experience on the footplate, in days of steam in Britain. Priced at $17.95.

MAUNSELL'S NELSONS by D. W. Winkworth describes and covers one of the smallest classes of express passenger locomotives produced by any of

the four railway groups in the inter-war period. Priced at $18.95.

All three publications should be available at the usual outlets.

SILVERTON TRAMWAY LOCOMOTIVES a Railmac Publication describes and illustrates the locomotives used on the Silverton Tramway. Priced at $1.80 this booklet will be reviewed in a future issue.

Mail Order Models, who advertise in AMRM Market Place, are importing a number of books from New Zealand, most of which will be reviewed in future issues.

An article describing the building of a vertical lime kiln was published in the November 1980 issue of Model Railroader. What was unusual in this fine article was that the prototype can be found in New South Wales, Australia. This issue of MR is exceptional for it also describes and illustrates Dean Freytag's layout. Dean is well known in the US for his rather large structures, like a blast furnace, lime kiln and chemical plant. The structures are well detailed and have won Dean an award or two in NMRA competitions.

For the newcomer to our hobby a couple of very interesting articles have been published by MODEL RAILROADER in the past few issues, under the 'All Aboard' heading, which is aimed at describing the basics of model railroading. Laying Flexible Track was published in the February 1981 issue while Two Rail Wiring was described in the March 1981 issue. An excellent description of model truck conversion was also in the March issue.

Toy Fair 1981

The toy fair this year was (for us) something of a disappointment. This was partly due to our prior knowledge of what was coming for the Australian market from Lima, and also because of the small number of new items to appear. In view of the growing number of locally produced kits it must be expected that the toy fair will assume less importance in the future.

From Lima, the 'TAM' & 'MBE' carriages and the VR/SAR 'ELX' open wagons have arrived as well as the IP (Indian Pacific) power van repainted in 'Overland' colours. The 42 class was due for release in early/mid 1981 while a BP three dome tanker and a covered wagon (VR style) are due later in 1981.

Also noted, the SAR '930' class diesel is now numbered 937. Further improvements to traction are evident in Lima's 1981 productions and the range of accessories is increasing.

The Hornby large scale 'Rocket' and cars will be available through Southern Models and they advise that Zero One now has approval from local electrical authorities.

The Hornby catalogue indicates 1981 as the year of the locomotive. A range of 4-4-0 locomotives are proposed to cover all the major British railway companies; a Southern Railway 'Battle of Britain' class loco and a Class 86 electric loco are amongst the new items for this year. However not all items are likely to appear in Australia this year.

AMRI displayed some new vehicles, a tractor and figures from Preiser and new locos in the Roco range. AMRI are now distributing the Ibertren 'N' scale locos and cars from Spain, the Alco 'World' diesel (reviewed in this issue) is readily painted up as a NSWPTC/SRA '44' class or a SAR/ANR/AN '930' class. AMRI plan to release the model in '44' class colours.

The mainline range continues to expand but we are still to see some of the items shown in the 1980 catalogue.

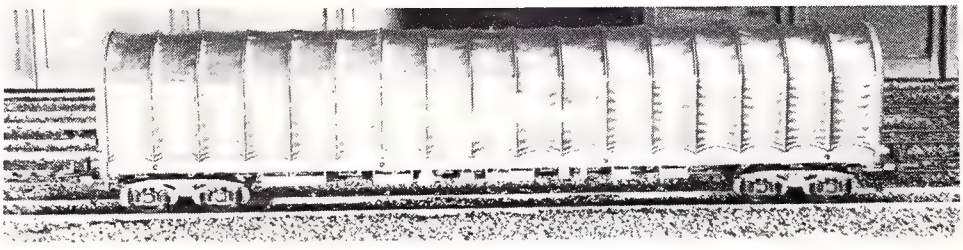
A new name to the scene, Iron Horse Hobbies, is now importing Scenimat products. Also displayed was the Trax level crossing kit (Airfix style).

Criticism

"Criticism — the art of making a reasonable judgment" (Collins English Dictionary) is something most of us find hard to accept, especially when the criticism is aimed at an object that is extra special. There is a very big difference between 'knocking' or 'generally rubbishing' an item and offering criticism, constructive or otherwise.

The ability to accept criticism, without adversely reacting, is not commonly found, but reacting and accusing everyone of 'knocking' is definitely not one way to overcome the problem.

Australians are renowned for 'cutting down to size the sacred cows in our society, and often the knocking of something from another state becomes part of our humour. Some will always be knockers, but it is not too hard to realise that their comments are repetitive. We all, however, must learn the difference between criticism and knocking, and if seeking an opinion do not get upset or brush it aside as 'knocking' if the comments do not say what you want to hear.



V.R. 'VFMX' by LIMA. A future release.

We were first . . .

As with most new items, especially those we have been waiting for for a long time, there is always a rush to be the first to get the new models and get them running. This competition is usually only among close friends but when an exhibition is eminent the competitive spirit is increased.

The Chatswood exhibition was the eighth day of the period mentioned previously and it was only natural to see some of the Lima TAMs and MBEs in service. Modellers had been quick to mount Kadee couplers and there were some on the SCMRA layout that had even repainted the rooves to the silver/white and beige scheme, which certainly changed the appearance of the model. It was also encouraging to note the higher quality of the passenger trains, for the string of Lima coaches behind a C38 have a pleasant appearance.

It was, however, very encouraging (and a little bewildering) to see a painted (Mansfield) 44201 heading a string of TAMs/MBEs: Bewildering, for the 442s only became available the day before. Yet here was 44201, fully painted, lettered and decalled! No doubt a record for swiftness could be claimed. But everything was not as it seemed. 44201 was an advanced sample of the production run, which was flown out from Korea. David Anderson of Mansfield Hobbies had it painted by Howard Smith and lent it to the SCMRA boys to run on the layout.

The 442 and the TAMs/MBEs are a true illustration of the high standard this fine hobby is reaching.

To Whom the Honour

Over the years in some circles there has been a fierce (but friendly) competitive spirit built up among exhibition layout builders to build a layout more realistic in appearance and operation than others. To this end there have been some very good layouts built, which has been reflected at exhibitions, and the rewards by the prizewinners justifiably received. In this initial circumstance the *builder* received the award and the rewards.

Many of these fine layouts, after a few years service, have been sold by their builders to other modellers, some seeking the kudos of owning a high-quality exhibition layout. Now the second owners are exhibiting the layouts and, as such, competing for the prestigious (to some) awards. If one of the layouts wins the award who should receive the prize: the owner or the builder? If the layout was built by a group (or club) and it is sold to an individual, can it win the award for the best layout by an individual?

One must question whether it is ethical for someone to 'buy' a prize in any competition. Most competitions for models require the builder to state how much of the model is his own work, but this is not the case for layouts. It seems that the time has come to sit down and evaluate the situation.

Melbourne Exhibition

It is usual practice, within the pages of AMRM, to report on the feature exhibitions, but unfortunately the recent Melbourne exhibition was disappointing in one respect that very few words would be needed to fully describe the action.

The usual description at Camberwell Civic Centre was a fine display of commercial wares. The hobby shops of Melbourne did themselves proud by the display of goodies and the excellent layouts that accompanied them. Branch Line deserve a special mention for the superb narrow gauge layout that could hold its own in any compeition. It could not win the best layout award for it was deemed commercial, although the Branch Line stand won the commercial award.

Every so often exhibitions have an off year. Last year it was Chatswood's, this year it was Camberwell's. No doubt there are mitigating circumstances, BUT the public saw what was a very low key selection of layouts, and many may not return next year when Camberwell could, quite feasibly, have its best ever selection of layouts!

To the local modeller there was little of interesting stimulation for not one layout support VR or *any* R (Australian style) rolling stock. All was not lost though for the award winning layout, in N scale, depicted an ore loading dock area and featured a working tippler and ship loading facilities. The layout was exhibited by the West Coast Mining Corporation.

No doubt, with a disappointing exhibition, the feature on this year's Melbourne modelling calendar would have been the Hobsons Bay Convention, for many fine Melbourne layouts were to be on the visitation list. The sample of the home layouts observed were certainly better than those at Camberwell, and maybe the organisers would have been better advised to have hired a fleet of buses to transport exhibition visitors around to the home layouts where the true high standard of Melbourne modellers could have been observed.

The exhibition did not reflect the quality of or quantity of modellers working out of Melbourne, which is very unusual for Camberwell.

Avoid Disasters

One must wonder what exhibition organisers can do to avoid a dearth of quality layouts or operators to run them. The problem must be considered at a hobby wide level and not in any one district, for the problem is universal (or at least Australian wide).

Modellers must be encouraged by more than 'pat on the back' thanks to build and operate quality layouts. To date Exhibitions have been run to mainly finance the activities of the organising bodies, and very few clubs who organise exhibitions have quality layouts to exhibit (with a few noted exceptions). This puts the onus on privateers or non-aligned clubs to build and operate exhibition layouts for the eventual financial gain of another club. The pittance that is sometimes delved out to cover transport costs is usually flat out covering the cost of petrol, let alone parking, etc, etc.

The cost of an exhibition layout these days nears $1,000 in raw material costs, and unless the exhibitor has had a ready sale at the end of the layout's life this cost must be written off at the expense of the exhibiting modeller.

No doubt very little will be done to overcome many of these problems, but there are some small things that exhibition managers could do to assist or to help exhibitors, like providing him with sufficient complementary tickets so that at least the wives/girl friends/mistresses/husbands/boyfriends / masteresses who have at least morally supported the modeller during the building stages can see the layout and the exhibition free of charge.

If something realistic is not done, and soon, exhibitions as we now known them will cease to exist.

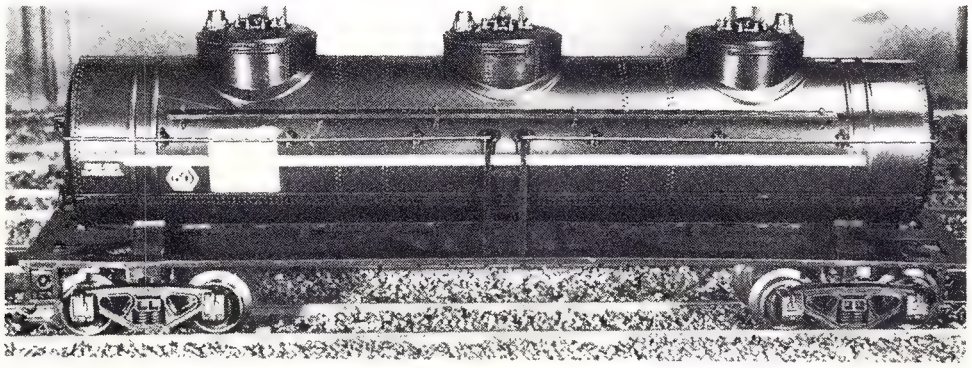
Were There . . . At Last . . . Are We?

Many in this hobby are righly pleased that the Australian prototype section of the hobby has at last reached a stage where it is possible for a boy/girl to enter the hobby via a train set (true Australian style) and maintain a steady interest via the quality models being produced by the local cottage industry. Many seem to think that the activities of the large ready-to-run producers and the injection moulded kit producers will drive the smaller limited run producer (especially those who have pioneered the hobby) from the scene.

Nothing could be further from the truth!

Sure we are sitting pretty. Lima and Trax have done us proud and made it possible for the inexperienced modeller to enjoy some of the benefits that in the past only modellers with exceptional ability could enjoy. But if the hobby only retains this level where, realistically, everything is virtually done for the modeller, the hobby will lose the hard core modeller who sets the high standard that others strive to attain.

There is a need NOW, more than ever, for firms like



BP tanker by LIMA. A future release.

MRC, Friedmont, ABL, BGB, FSM, Stephen Johnson, Rails North Models and Broad Gauge Models to retain their commercial interest and produce not only the limited run or specialty items, but to also produce (where demand requires) higher quality models of those produced by the injection moulded process, which does have its limitations.

There is still a need however for individuals within the commercial side of the hobby, to consider the overall implications of their actions on a hobby level. There is also a need for co-operation and liaison among producers to avoid stagnation and disinterest among the customers. Competition is great, but so is ethical behaviour. There is plenty of action for all.

High Quality Models Galore

For many years, the local prototype modeller has struggled and cried out for models and kits of high quality to enhance the roster of rolling stock. Every now and again individuals with a touch of brilliance passed through the scene, created an impression (in some cases everlasting) and passed on to other fields. The modellers (at that specific time) gained from these all but brief occurrences by either purchasing and assembling the kits or purchasing and reselling them to modellers new to the scene and willing to pay high prices for quality.

EMCE Models and Doug Bocking (Workshop Five) will be remembered by many for the brilliance and high quality of their products. As their respective products left the scene a gap was left, for while there were other to produce models the same quality was not quite evident.

Stephen Johnson Models came onto the scene in 1980, and although the quality of the product was high, availability was limited. ABL Models took on production of SJM kits, at least the 'GHG', but still availability was limited, for all concerned had other jobs to attend to. Casula Hobbies joined the field by supplying some quality kits (some from Australian Transport Models patterns) but still availability was limited. In March 1981 Rails North Models came onto the scene with a few kits that suggested that they will soon lead the field in consistent quality and quantity, for availability is to be no problem as manufacturing is (for a trial period at least) to be full time, i.e. a professional model kit manufacturer.

Announced at the same time as this delightful news was the exciting fact that full time work would enable better availability of:— Casula Hobbies kits (made under licence), Stephen Johnson Models, and ABL Model Products. This can be great for the local modeller as a number of quality products will be constantly available — off the shelf — at a limited number of major model shops.

For those concerned an exciting but nervous time lies ahead, for although time and effort must be devoted to manufacturers to bring in a constant flow of the ready cash upon which to live, they must also be gauging the acceptance of a more constant supply of quality kits.

The question must be asked, "Is there sufficient money to support a number of full time manufacturers?"

There is one way that these manufacturers can help increase their sales and that is to gauge their products to *all* the market. Most of the kits are so well designed that a ten-year-old could assemble them, if the correct assembly directions were supplied. Kit manufacturers should bear in mind that most modellers, no matter how experienced, do not have the knowledge or experience to know details of every piece of rollingstock or to even think along the same lines as the kit designer. It is one thing to brilliantly design a product but another thing to portray the necessary assembling details to the modeller. For the final benefit, the cost is little.

Commercial News

As revealed in the Sydney Toy Fair report, Lima plan to release a model of a three dome tanker painted up as a BP (British Petroleum) unit and a model of a Victorian Railways VFNX (Prairie Wagon). Although both will be repaints of existing Lima models it is surprising how close each are to the prototype. The models are illustrated by accompanying photographs.

Trax have released a level crossing kit designed similar to the no longer available Airfix kit, which is aimed more at the toy market than the scale modeller. By the time these notes appear in print the 'CCH' and 'RSH' version of the Trax hopper should be available, and Trax plan to follow up with the 'RU' and early style 'K' wagon.

All the 442 locos have sold out, and if any credence can be given to club discussion, many modellers are disappointed for they missed out . . . being a little reluctant to order in advance, sight unseen. This style of purchase is unacceptable to many, but at present it will continue to remain with us. Limited runs . . . of high demand models. We have to trust the importer to continue to be vigilant in model detail and accuracy.

'You cannot see the wood for the trees' is a rather common phrase which can often apply to us all. The recent interest in local prototype and the various components has come so quick and fast that a rather essential component came onto the Australian market unheralded and remained unseen for quite a while. Roundhouse (MRC) released a bogie (truck) set labelled as a Roller Bearing (Heavy Duty) and it is very similar to the NSWR top hanger type bogie as found under many goods wagons, especially BD, BDL, etc. The detailing (in delrin) is up to the usual high (MRC Roundhouse) style and the plastic 33" wheels can be readily replaced with Kadee 33" or 36" wheels, or for that matter any other NMRA standard wheel set. A fine product, if they can be found in the hobby shop.

Sentinel have added more wheel sets to their range which now includes 10.5mm spoked and disc, and 9mm disc wheel for the HO/OO 16.5mm gauge. They are also working on driving and bogie wheels for the re-run of the C38 locomotive in 'N' scale.

Now that a better production level can be scheduled Casula Hobbies is looking forward to having their special (under licence) models become available off the shelf. The FS/BS/RBS/BSR coaches, 422 and CL loco bodies should be readily accessible in late May and by the end of 1981 the 80 class, 421 class and 43 class diesel bodies should be available.

Observed at the Chatswood exhibition was an HO scale model of a Sydney double decker bus, made by Bill Parkinson of Australian Transport Models. It is not known yet if they will be released in volume or in kit form but there are 15 different syles. For the record the Sydney style double decker bus can be found in many country areas. More news on this item later.

Bergs Hobbies, while still having stocks of the NSWR 45 class kit (to be reviewed next issue), which also can be easily modified into a SAR/ANR 600 class, soon expect the arrival of the 49 class kit, again in white metal. Also expected in the immediate future is their third injected styrene kit which will be a four wheel cattle wagon (CW). They also plan a fibreglass platform for their station kit. The Oil Burner D59 has arrived.

FSM who have been very quiet in recent months, have released a C38 tender kit, which is designed for use behind the Lima C38 and will complement the FSM C38 streamlining parts that have been available for a few years.

A. Wests' 'Weather It' and 'Blacken It' is now available in Australia from Broad Gauge Models, who are also importing the Railcraft range of products. Initially all will only be available by mail order.

Model Dockyard advises a slight delay in the delivery of the booked out run of the AD60, now due in May 1981.

Mansfield Hobbies plan to release an HO model of the streamlined C38 later in 1981, followed by a model of the NSWSRA 45 class in 1982. Modellers not wishing to miss out should book their order now.

The 'GHG' guards van kit by ABL Model Products is now available in a few more Sydney outlets, and has now been joined by a kit of the Baldwin tenders as used behind the NSWR 29 class, and in more recent years behind the Z19 class on the Oberon line. These epoxy cast kits (patterns by Stephen Johnson Models) will soon be joined by a kit of the 'JHG' guards van, a kit for the NSWSRA '48' class and the SAR/ANR/AN '830' class, the last two different models. All should be available in a not so restricted supply as soon as development problems have been overcome.

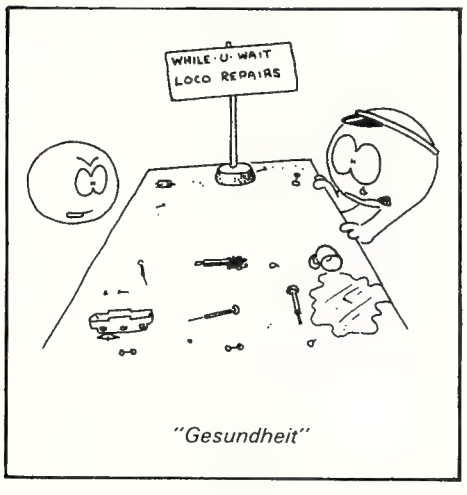
AR Kits are still having problems with the projected 'BCH' kit and still plan to release it, but in the meantime will release a kit of the 'GLX' louvre van as used in quantity in Australia on the bogie exchange system. The 'GLX' can also be used with little or no modification as a 'GLV', 'TLV', 'TLX' and 'LLV'.

Stephen Johnson Models, once very hard to obtain, should be more easily obtained at model shops in the immediate future. The 40 ft water jin, an exhibition special, will be re-released in quantity, as will a 'BD' and a 'BDL/BDX' kit. Samples of the last two have been seen, and maybe at last the high standard of the EMCE 'ELX' kit (considered by many to be the best Australian produced model) has been equalled . . . none too soon. The BD and BDL/BDX kits will have interior detail that equals the standard SJM kits have attained in the last 15 months. The 'LHG' guards van is to be re-released while a 'JLV/JLX' louvre van kit is on the projected models list for release later in the year. At present there is no plan to re-release the 'HG' guards van kit, but modellers who have missed out should know how and where to voice their disapproval.

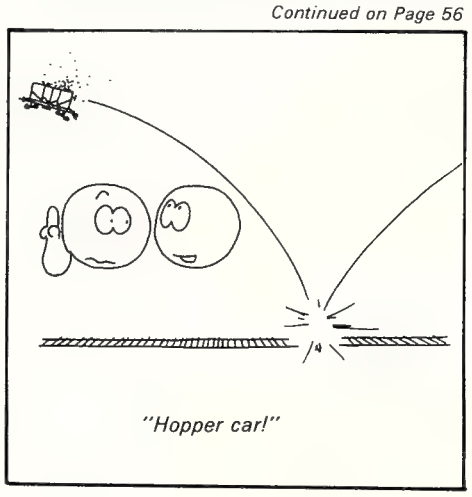
The Lima 'TAM/MBE' model hits Sydney with a gusto, and disappeared. "Sorry, sold out. Awaiting an air shipment", was the reply. It appears that the initial order was a little short, but then some manufacturers can create a genuine demand for their products in all innocence. More models will arrive from Italy as production allows.

Rails North Models, a real newcomer to the HO kit scene, started off with the 'MLE' and 'HGM/HGX' as reviewed in this issue, both very fine kits. They have released kits for two styles of the KLV/KLY as owned

Continued on Page 56



"Gesundheit"



"Hopper car!"

ANOTHER GARRATT REMOTORING

by Bill Clow

Like many other modellers I purchased a model of the N.S.W.G.R.'s AD60 class Beyer Garratt from Model Dockyard's second release. The appearance of the model was very good but the performance left a lot to be desired. One motor unit and the boiler would perform satisfactorily but when combined with the second motor performance dropped. One unit would run well while the other stalled, ran slowly, you name it.

While comtemplating how the performance could be improved, e.g. resistors, extra contacts, etc., a good 5 pole motor appeared on the scene. These motors are the same size as the Triang X04 (a 5 pole armature can be purchased to fit the X04 unit) and offer the advantages of good torque, smooth running and ease of mounting.

With these units available some thoughtful fellow fitted a couple to his Garratt and wrote about how to do it in the May/June, 1977 edition of this magazine. Some of my friends and I carried out this modification but we found it involved a lot of cutting, grinding and soldering. However, the result was a much improved loco although there were still some problems — it was more noisy and there was still a tendency for one unit to run faster than the other. I could now double-head with each loco pulling evenly.

Then the E.C.M. series of motors appeared on the scene. I fitted one to a Bergs 48 class Diesel and was impressed by its quietness, throttle-response and performance. Following that success the idea of fitting similar motors to my Garratt began to germinate.

The more I though about it the better the idea seemed so I purchased a pair of E.C.M. type 3 motors. I dismantled the front tank unit and coupled it to the boiler and ran it on the test track to determine armature rotation. I then connected the test track leads to the E.C.M. motor to determine which lead to connect to which terminal.

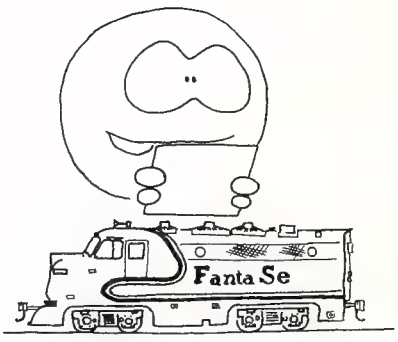
The next step was to remove the existing motor and unsolder the pickup leads from the brushes. I then checked the condition of the drive-coupling to the gearbox. The original coupling is rubber and if you find that it is perished I suggest that it be replaced with a piece of small diameter nylex tubing. This tubing is flexible and resistant to oil and so it should last. I also checked the gearbox and drive mechanism for mesh and binding to ensure that it is free and smooth in operation.

The next step was to place the E.C.M. in position, with the shaft in the drive coupling. I used the existing hole in the mounting place and marked the hole position on the plastic mounting bracket on the E.C.M. I drilled the hole to take a 10 B.A. screw and I then marked off and removed the front "steady" bracket; alternatively, it could be cut off flush with the motor casing. The motor was mounted on the metal mount and positioned to obtain as close a straight line as possible through to the gearbox; it is important that there is no built-in load.

I then soldered the two leads to the motor — one from the boiler pick-up to the predetermined lug and one from the chassis or mounting bracket to the other lug. I found that a heat-sink was useful in this operation. The unit was then tested on the track for free and correct running as well as for throttle response.

The body and chassis were then reassembled and tested again. I noted any unusual noise, drumming, etc., and made any necessary adjustments. I then converted the other unit. The conversion actually takes less time than it has taken me to write this article.

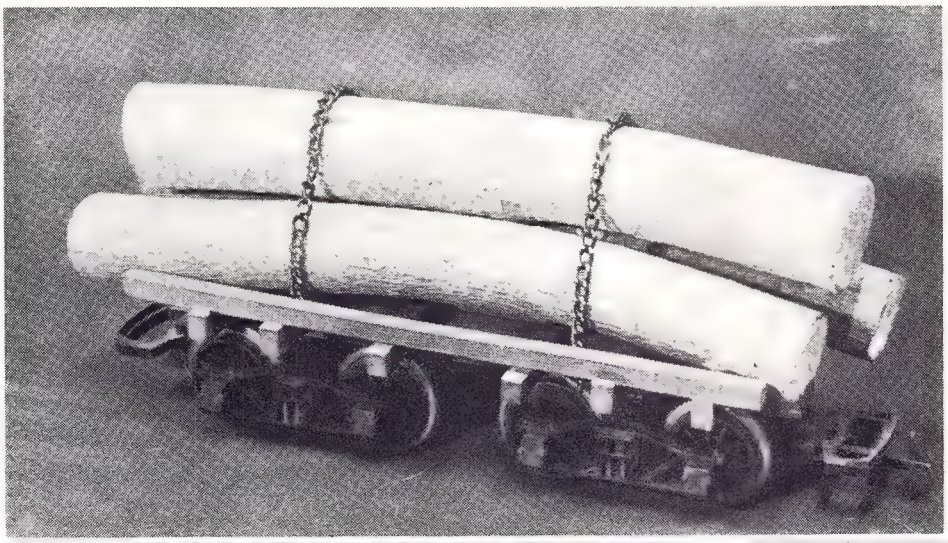
Don't throw out the original motors. I have another modification in the pipeline that will make use of them.



'This year's Rev Edward Spooner Memorial Trophy goes to . . .

LARGE SCALE MODELS

Good quality models are not limited to the small scales as Greg Wilson, a youthful 14 year old, shows here.

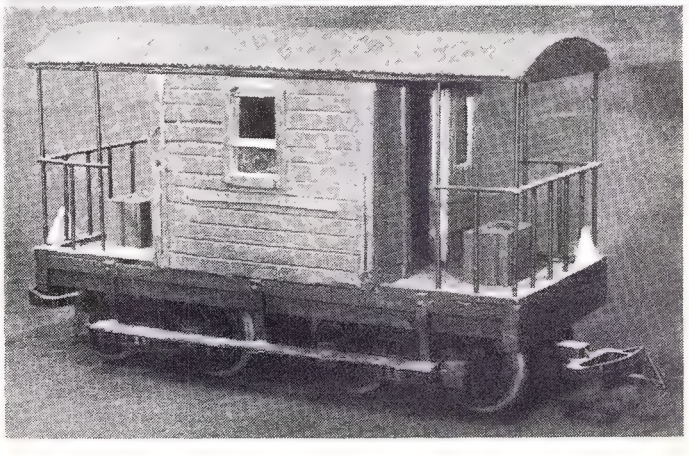


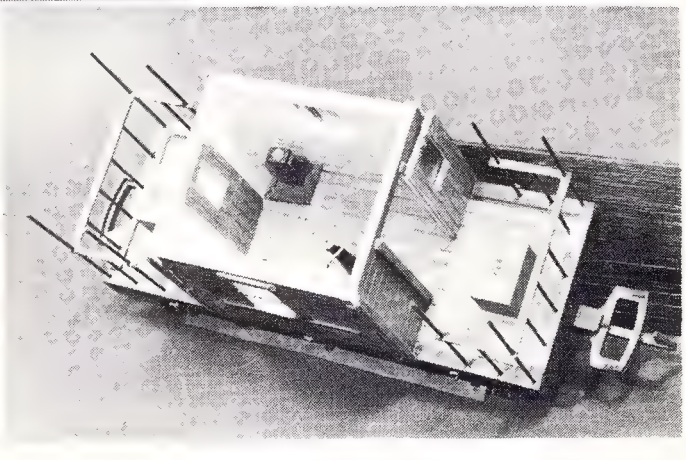
The log wagon is 8 5/8" long and was built from timber and fitted with LGB bogies. In all three log wagons were built.

Also of freelance design, although obviously based on the 'CHG' brake van as used on the New South Wales rail system, the bogie guards van is 8 3/4" long, 3 3/8" wide and 5 1/4" high and is fitted with LGB bogies.

Both models are an example of the quality that junior modellers can produce.

Photographs by Max Burke.





AMRM NEWS

Continued from Page 54

by the NSWSRA, and plans for models of the 'MLV' and 'HLX' are in hand.

MRC kits have, over the years, shown the occasional brilliance of high quality pattern work which has not always been portrayed by the polyester moulding method. There is however quite a number of kits that can be worked into very good models and the release of the VR/SAR Joint stock 'AE' coach will be numbered among them. Soon to follow will be the 'BE' style, but unfortunately will only be available at Viaduct Hobbies in Melbourne.

Friedmont Models continue to increase the range of tram kits which can be seen at major exhibitions.

Broad Gauge models displayed their next kit at the Camberwell exhibition, the kit being an epoxy cast station building for a country station.

An N scale 44 class will soon be released by AMRI, a repaint of the Ibertren 'World' series loco. This model is the basis for a feature article soon to be published in AMRM.

Broad Gauge Bodies continue to create an impression in Victoria and South Australia. Although he has been producing kits for many years, Peter Ziegler was recently confronted with a problem and faced it by producing "in mass" his simple style of kit. The method has been used for many years, and page upon page of this magazine has been spent debating the good and bad points of the polyester open moulded kits. But the BGB style appears to overcome all. As indicated, the style of production has been used before, often to the dismay of some modellers, but the quality control is very high, the pattern work fair to very good, flash eliminated during manufacture, and a first rate, well detailed (but poorly produced) set of instruction leaflets accompany each kit, complete except for bogies and couplers. The instruction leaflet not only supplies details on how to assemble the kit but includes photos and diagrams to help illustrate the difficulties as well as a few words on the prototype. As indicated, the style has been used before, but not with the same dedication or determination. SAR and VR modellers will benefit from this breath of fresh air.

BGB have already released the VR 'VLEX' (VSX) kit and expect to release a few more before these notes are in print, which will include SAR 'SGMX' open wagon, VR 'BLX' box car, and a limited run of SAR 'M' van with 'Brighton Cement' decals. Also projected is a SAR 'R' van (a four wheel ice cooled van) complete with decals.

Weico Models advise that, for a while, the short run of the AS/BS 'Spirit of Progress' car kit has finished, while time is spent preparing new projects. They are at present working on an 'N' scale VR 'S' class diesel body and also propose to release a few completed AS/BS coaches direct.

PJM advises that body kits for VR locos (cast in polyester) are now available being the 'X', 'Y', 'C', and the three styles of the 'T' and box vans 'BLX', 'BLF' and 'BP'.

Modus Operandi.

This issue David Leaman presents the first of a four part series describing the operation of trains on his layout, the Lakeland Railway, which was presented in the March/April 1980 issue of AMRM. Modus Operandi will be published every second issue. AMRM invites other modellers to write and describe their method of operation (there is no need to go into lengthy detail), so that readers, who have not yet joined the growing band of modellers operating their layouts with some organisation, can compare various methods, and choose the one that best suits his/her need.

Late Extra.

As we go to Press (1.5.81) it is obvious that not all the news items we have reported on will come to the fruition that individuals expected.

As this is page 56, it is also obvious that this issue of AMRM is of record size, being 72 pages thick. Since the current group took over the running of AMRM they have increased the size more than double, and readers have responded by more than doubling in number.

With the increased size, which will only occur when advertising content allows, there is a great need for readers to participate in producing articles for AMRM, more than ever before. It is one thing to be able to print 72 pages but another to be able to fill those pages with interesting articles.

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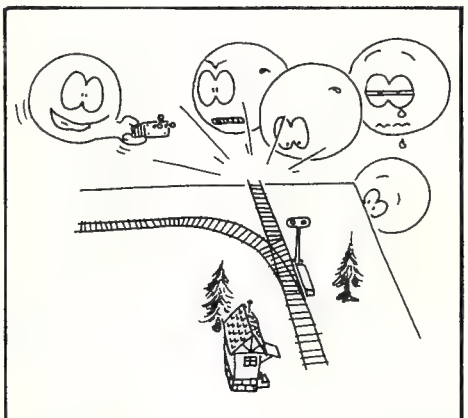

"Found the buffer stop. Where's the loco?"

MODELLER'S LAMENT

There it goes again! Such a plaintive cry! "I must have a clean up in the train shed." I'd heard it often — over many months — but nothing more than a big sigh ever followed the statement. I'd think; He'll say it once too often one day. And he did! Being of moderate temperament — I refrained from yelling my advice — and simply offered to help himself on the following Saturday. His reply of "Yeah" was proof that he heard me say something but obviously didn't comprehend its meaning.

Saturday morning arrives and I present myself at the shed door saying, "Let's get stuck into it." Himself having no idea what I was talking about, I spent some minutes explaining my mission on the sacred ground. His expression of surprise turned to amazement then utter horror as full realisation of my intention finally got through his cranium into the grey matter.

We started well; on hands and knees sorting out various left-over bits of timber, and storing away tidily anything bigger than six inches square. Sweeping each section as we went and sneezing with gay abandon at the dust, we were soon half way through. Coming upon a number of cartons, I decided they could also be cleaned out. Shocked silence! I was very good though! Whenever something was not obvious junk, I asked himself if he wished to keep it. I learnt long ago to discern between obvious junk and doubtful junk. The former is tossed away — the latter kept 'just in case I need it one day'. Poor hubby! My questions only allowed for a definite 'yes' answer. Hesitations of 1.5 seconds meant the article in question was thrown out.

I realise himself must have suffered badly during the morning but it was all over by lunch-time and he happily 'played trains' all afternoon. Wonderful occupational therapy after such a shock to the system. And with luck, I won't hear that plaintive cry again for quite a while.

Modeller's Wife

Reprinted from The BUFFER STOP, the official journal of the South Australian Railway Modellers Association, with the kind permission of the Association.

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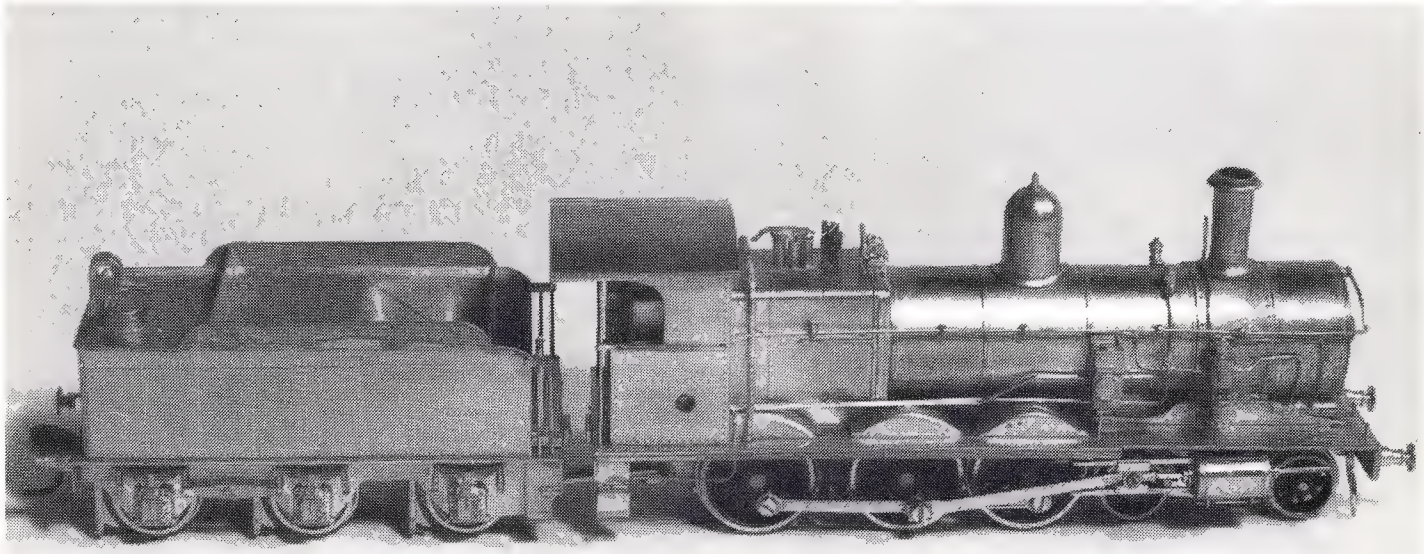
A SUPERHEATED C3OT LOCOMOTIVE

Roger Johnson purchased a Berg's C3OT class locomotive and then . . .



'Why would anyone destroy a perfectly good engine?', was my wife's reaction. Why indeed!

Well, I wasn't happy with my model. The running qualities were good but it just didn't suit my layout. So I made a list of the changes needed:

1. A bogie tender,
2. An extended smokebox,
3. Extended handrails,
4. Rerouted piping near the Westinghouse pump,
5. A pump silencer,
6. Ramsbottom valves,
7. A more realistic whistle, and
8. Correct diameter cylinders.

To date, the only changes I haven't completed are 1 and 8. I have produced drawings to etch a bogie tender and, shortly, I'm hoping to have brass side-frames cast. Correct diameter cylinders are almost impossible due to the oversize, side rod 'centre-to-centre' distance, and the correct width across the outside of the cylinders.

NOTE: These changes demand some expertise in the use of the soldering iron and the capability of turning small brass fittings. Therefore, this article is not recommended to the beginner.

It was obvious that the smokebox extension was going to be the most difficult, so I commenced there.

Proceed as follows:

Release the superstructure by removing the front bogie, releasing the screw behind the cylinders and the two screws at the rear of the footplate. Cut the handrails on the forward edge of the smokebox side mounted handrail knobs. Unsweat the smokebox door knob; the handrail is in two pieces. Store the parts.

Unsweat the smokebox front next. (This required a fair amount of heat, so I wrapped a wet rag around the pump, boiler and lamp brackets to prevent a disaster). A spot of solder holds the bottom of the smokebox; access to this is from the underside. Remove the smokebox door wheel and dart and store. Using an old compass, centre on the door wheel hole and scribe a line to complete the circular door. Carefully file off the base of the smokebox and store.

Measure the diameter of the smokebox wrapper. (Mine, unfortunately, was slightly out of round which caused a bit of a problem when trying to graft on a round tube.) Use either a piece of tube or a solid bar to turn up a tube of the correct diameter. It is necessary to use a lathe to ensure both ends of the tube are cut of parallel. Tube length is 3'-0" scale LESS the thickness of the door. Trial fit and, if satisfied, tin both ends of the tube and sweat into place. Use the wet rag to carry out this operation. Fortunately, the manufacturer supplied a backing plate for the smokebox front; this will be utilized as the original front.

Retrieve the smokebox door and solder in place on the new extended smokebox. Care must be taken to ensure: the door is concentric with the smokebox, the door is aligned vertically. When cool, drill the handrail knob hole using the original hole as a guide. Solder on the knob and remove any excess solder.

The pump exhaust silencer was made from a piece of ⅛" diameter brazing rod. This was turned down until it just fitted between the frame and the smokebox. Then, using the C36 as a guide, the location of the strapping was marked and a further .002" turned off the remaining areas. The silencer length was the same as the smokebox extension. The silencer was soldered in place; a difficult task as the heat dissipated faster than it could be applied.

The Ramsbottom valves were turned from a similar rod using the Data sheet as a template. The valve easing lever was made from .005" brass sheet and the spring was wound from a piece of fine wire from the 'junkbox'. The whistle came from a scrapped loco; Calscale supply an excellent casting. Calscale also supplied the pump governor casting which is the only extra fitted yet.

The original 'cheese cutter' regulator was removed. A small piece of .005" brass was sweated on to the inside of the firebox. A new regulator, consisting of a piece of .005" brass sheet with a .015" wire handle soldered on the end, was made and fitted. Before realising my mistake, I fitted the regulator in the full open position.

Next are the handrail extensions. The smokebox knobs are unsweated. The handrails are shortened by half the width of the knobs and the knobs refitted. New handrails are made using the originals as templates. I found the two piece rail was handy as, when fitted in place, some amount of adjustment was available by removing a piece near the centre. This task turned into a 'hit-and-miss' nightmare for me but, after a number of attempts, came success. The handrails are soldered in place and excess solder removed.

The remaining task is the pump piping. The layout was taken from photographs and probably varies on different locos. Two holes were drilled into the silencer and .015" wire soldered in; again with difficulty. The remainder of the pipe work fell into place (well, almost).

The front hook and air pipe were removed in preparation for the fitting of a Kadee 5 or 8 and a Calscale pipe but this is not yet completed.

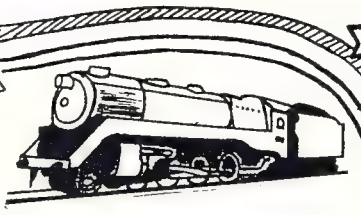
The limitations of this rework are:

1. Rivets on the smokebox joint and front cannot be made to match those on the remainder of the loco. This is a typical case for the photo-etching process.
2. Only the drum type of smokebox extension can be attempted. The version with (apparently) new, extended frames requires more work and a different process.

NOTE: There are versions of the superheated boilered unit with a six wheel tender; eg 3009, 3058 and 3063.

References: Data sheet C30 and 30T
Roundhouse, Jan 1980
RTM calendar, 1979.

Manuscript typing: Lyn Greenland.
Photo: John Burgess.



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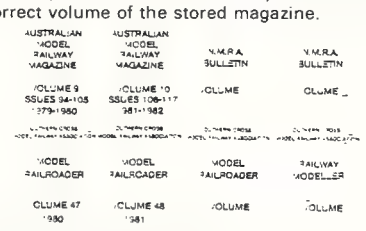

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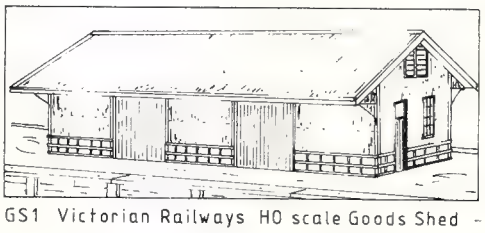

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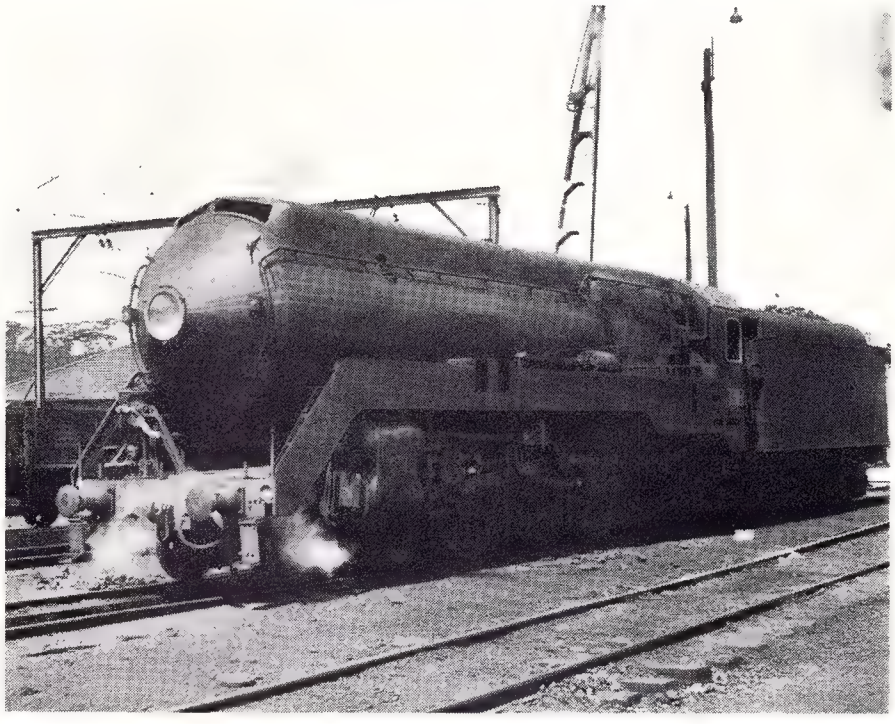

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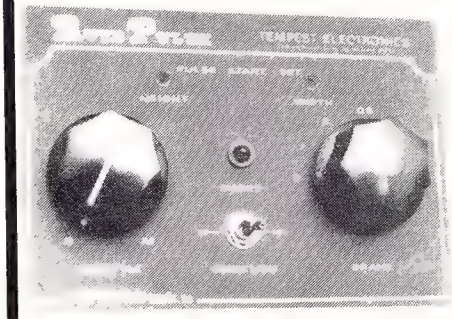

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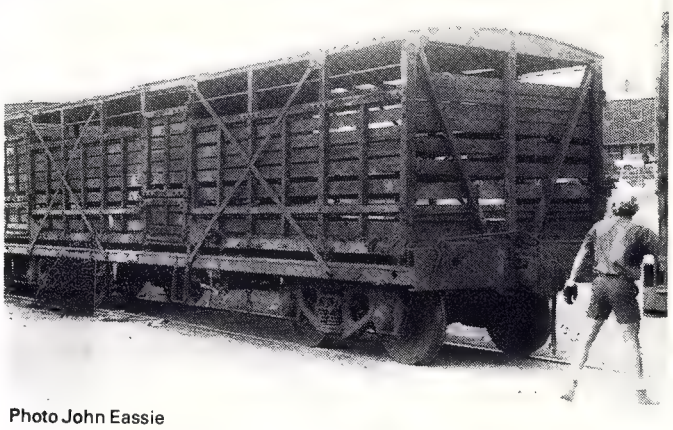

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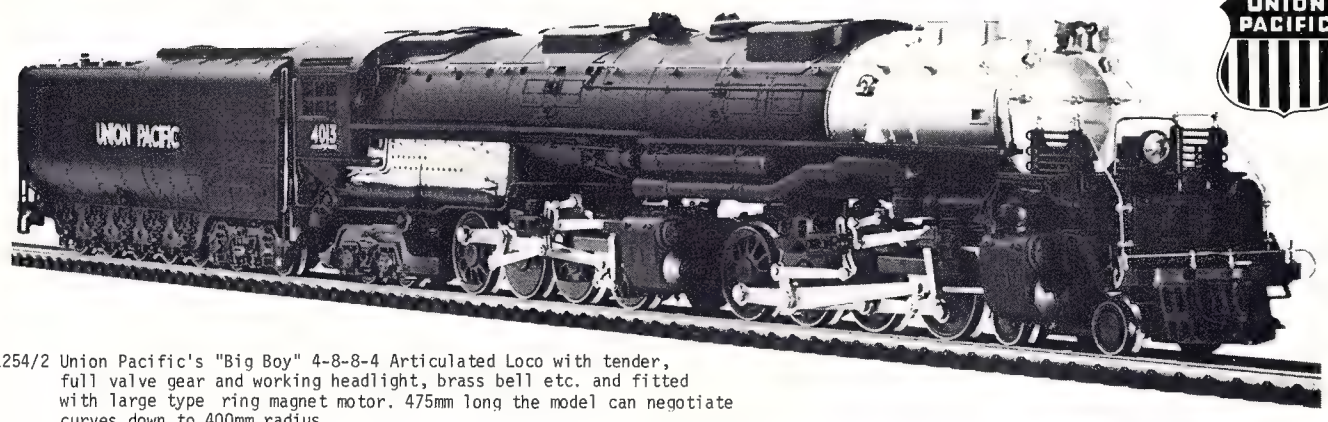

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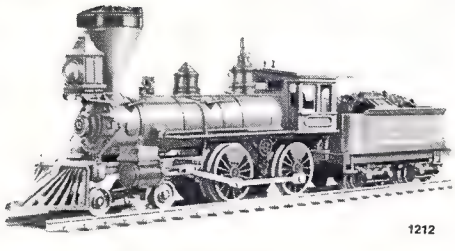

1212

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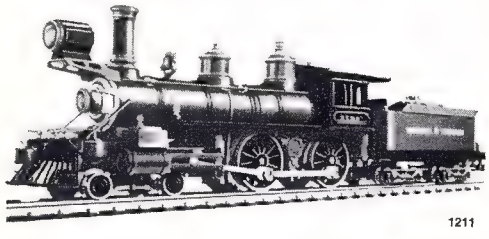

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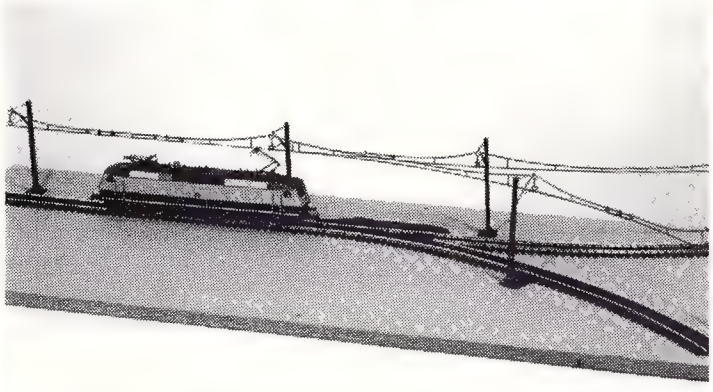

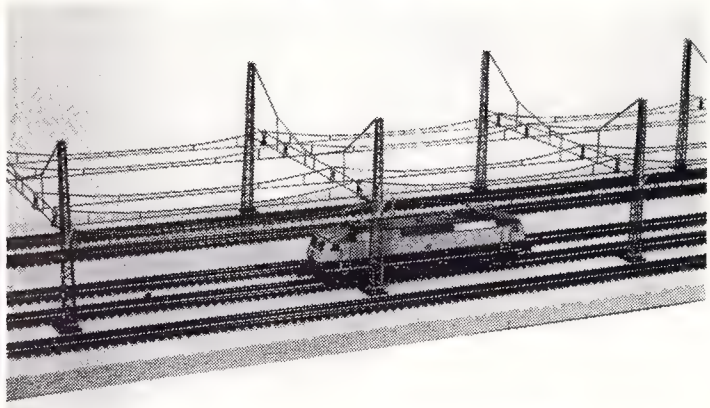

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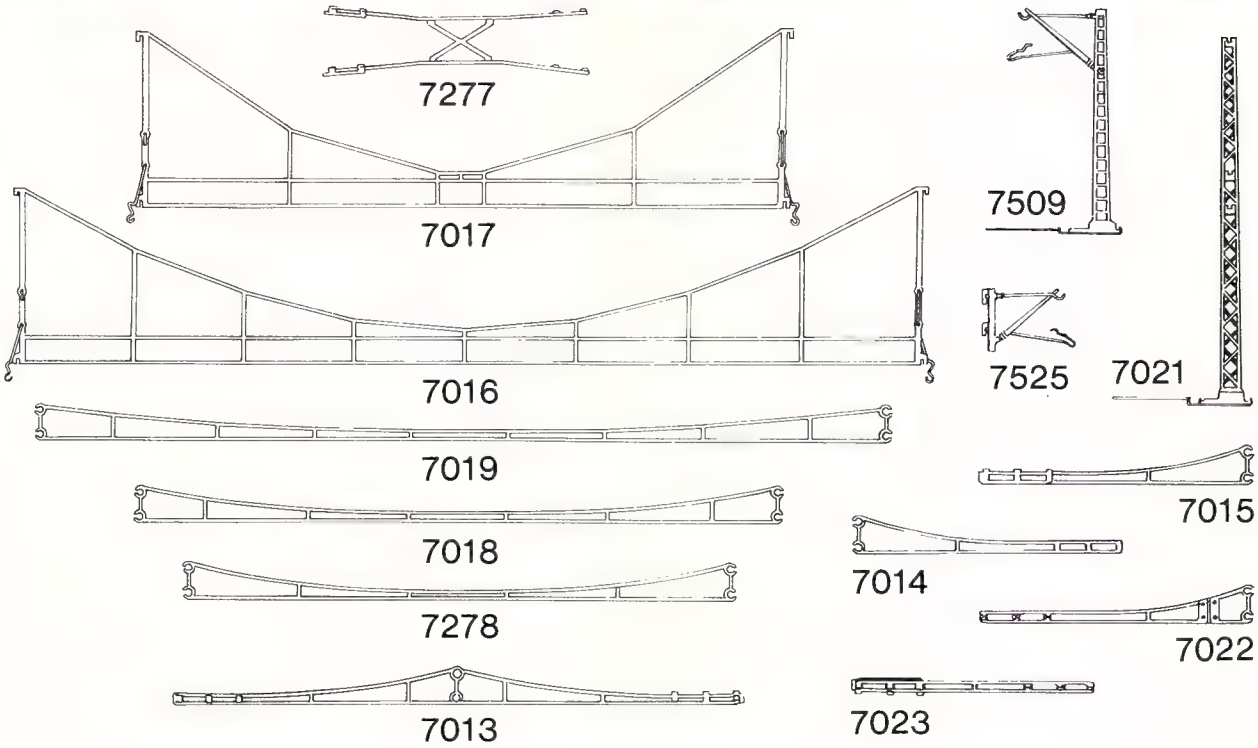

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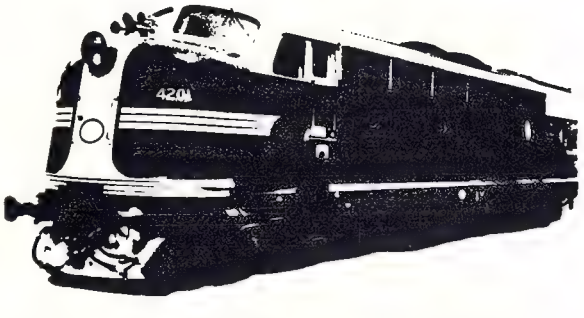

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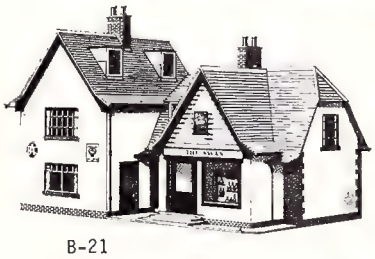
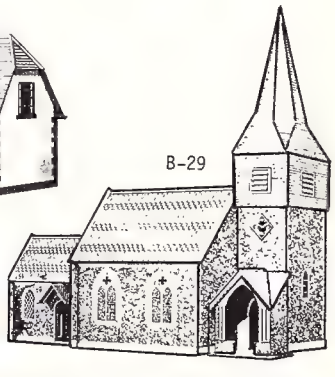


B-21



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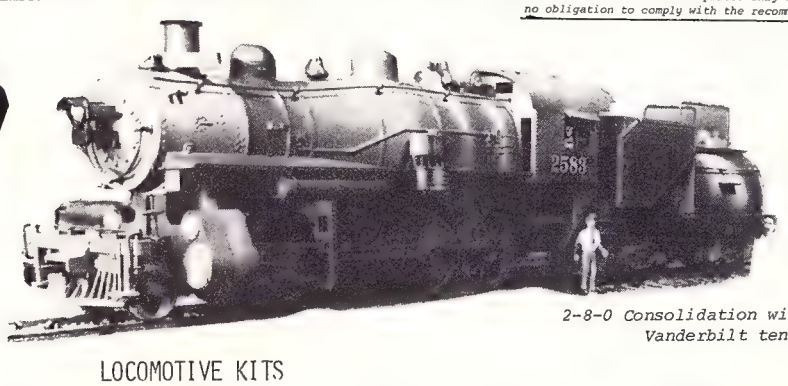

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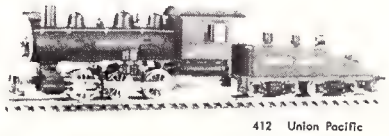

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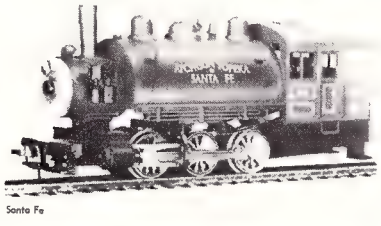
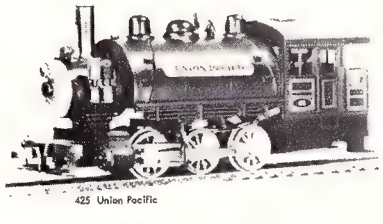


422 Santa Fe



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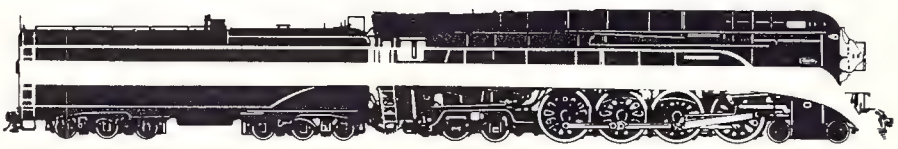

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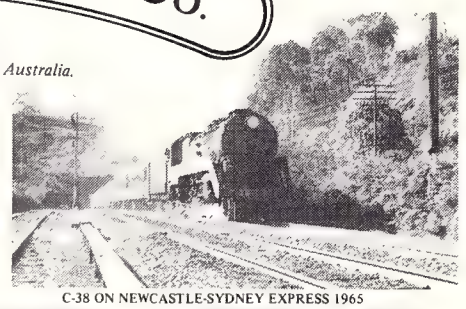
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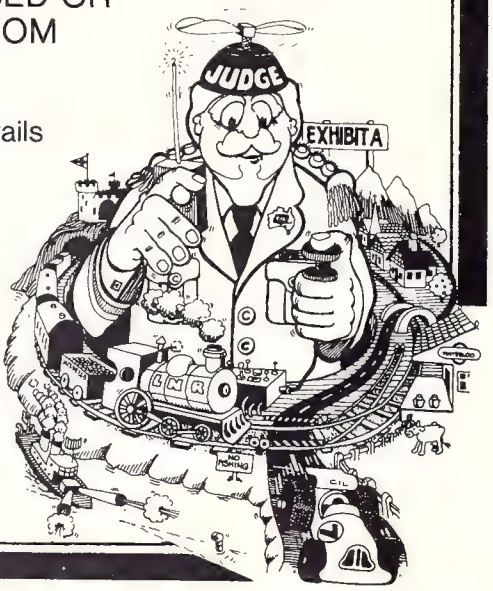

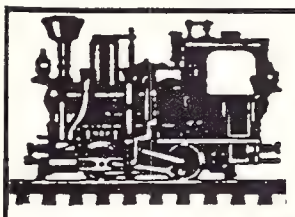

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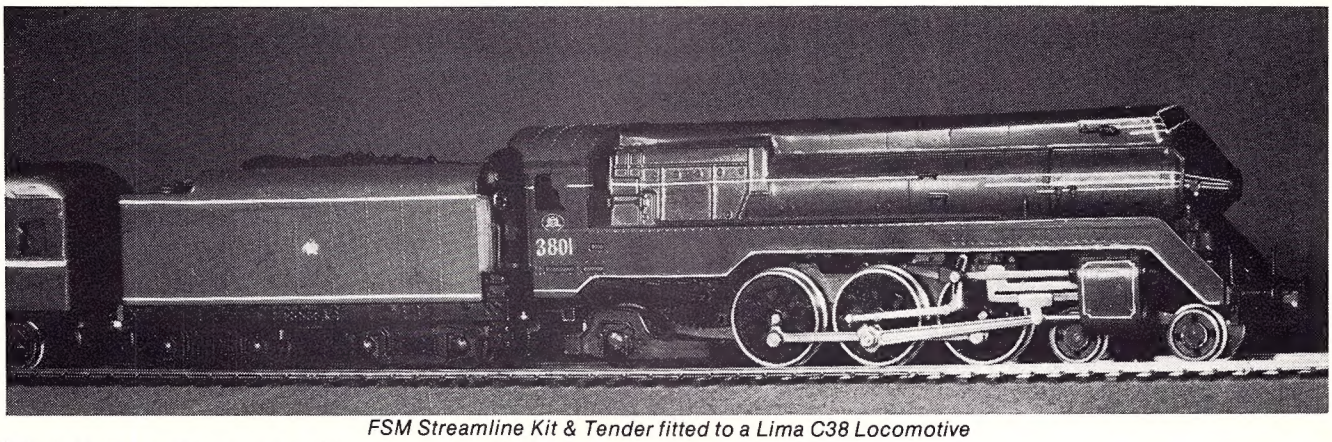

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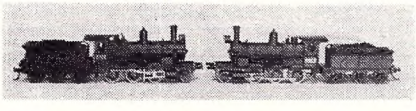

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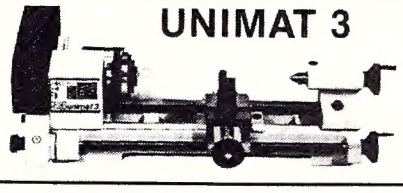

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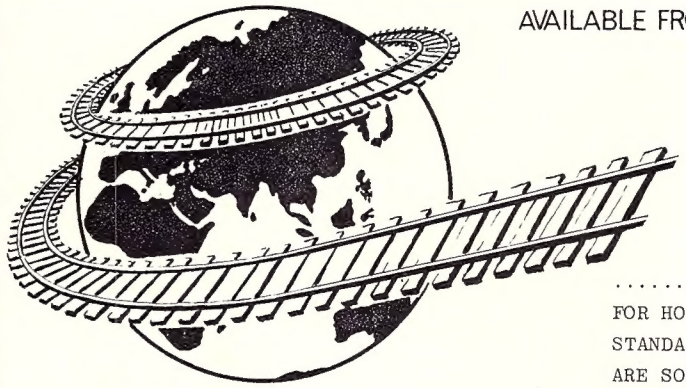

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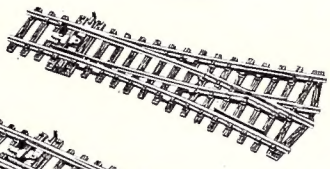

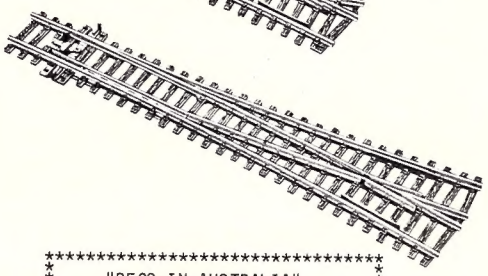

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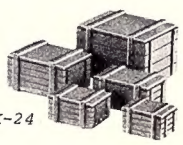
PECO LINESIDE KITS HO/OO

LK-22

LK-25



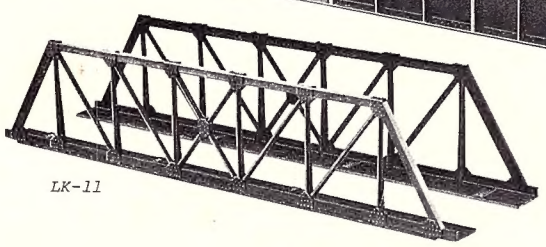
LK-24

LK-1 Water Tower - Water tank & crane combined
LK-2 Water Crane - Free standing type
LK-3 Coal Staithes - Open fronted staithes for yards etc.
LK-4 Platelayers Hut - Platelayers tool store etc.
LK-5 Coal Office - Simple building use as site office etc.
LK-6 Bookstall - No busy station is complete without its bookstall
LK-10 Plate Girder Bridge Sides (2) - Detailed bridge sides - 228mm long
LK-11 Truss Girder Bridge Sides (2) - Detailed bridge sides - 228mm long - use to span roads, rivers etc.
LK-21 Chocolate Vending Machines - use on larger stations
LK-22 Weighing Machines - Two for persons, two for parcels- essential items in any railway scene
LK-23 Milk Churns - British style - a useful accessory
LK-24 Packing Cases - Six assorted with loose lids
LK-25 Platform Seats - A must on platforms and elsewhere
LK-31 Single Tunnel Mouth with wing walls
LK-32 Double Tunnel Mouth with wing walls
LK-33 Single Road Bridge Side with wing walls
LK-34 Double Road Bridge Side with wing walls
LK-40 Stone Walling - 190 x 250mm (7½" x 10") approx.
LK-45 Flexible Field Fencing - approx 1050mm
LK-46 Field gates (2), Stiles (2) and a wicket gate - for use with LK-45
LK-50 Level Crossing Gates (4) with wicket gates (2) and fences
LK-51 Level Crossing Boom Gates (2) with fences (British style)

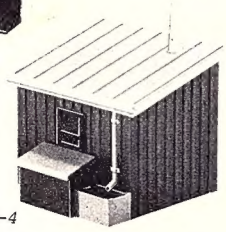
LEVEL CROSSING SYSTEM
ST-266 Level Crossing with 4 gates, No. 1 radius curve
ST-267 Level Crossing with boom gates (British style) No. 1 radius curve
ST-268 Add on Straight Centre Track
ST-269 Add on Curved Centre Track, No. 2 radius

The track section included in these Level Crossings is equivalent to the standard straights and curves in the Peco "Setrack' system and are suitable for use with other track made to the British Standard Geometry and with Peco "Streamline" flexible tracks.

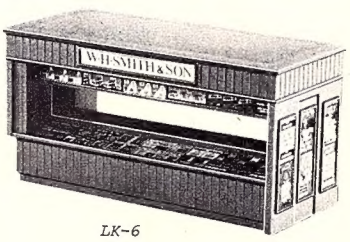
LK-10



LK-11



LK-4



LK-6

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